

Five man science forum will coordinate policy

by Alan Cane
Science Correspondent

The five Department of Education and Science research councils have set up a top-level forum to coordinate their science policy activities and to protect their interests. Meeting monthly, it consists of the five research council chiefs and is known as the HIRC (Heads of Research Councils) meeting.

Although the statutory powers of the five committees set up since the Rothschild reorganization to promote collaboration between the councils, it is the most important of the six committees set up since the Rothschild reorganization to promote collaboration between the councils. It is chaired by Dr W. M. Henderson, secretary of the Agricultural Research Council. The other members are Sir John Gray, Medical Research Council; Sir Sam Edwards, Science Research Council; Sir Peter Keir, Natural Environment Research Council; and Mr Robin Matthews, Social Science Research Council.

Although HIRC meetings have been minuted from the earliest days, a secretary, Dr David John of the SRC, has been appointed, and the research councils now present their corporate image through a new letter heading.

Dr Henderson explained that HIRC had three chief functions:

- It considers research council policy in relation to government and the public in general, such as preparing evidence for parliamentary select committees and the preparation of the councils' forward look for the DES.
- It takes an overview of the inter-council coordinating committee, an elaborate exercise through which the councils hope to improve their housekeeping to their common advantage. It has coordinating groups concerned with accommodation and building, grants and awards.
- It attempts to eliminate overlap

1,000 posts may be vacant survey indicates

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Sir Foster Noble, vice-chancellor of Leicester University, said that the deterioration of the staff-student ratio—at present 1:9.2 at Leicester which may worsen to 1:10 next session—was worse than the figures suggested because of the reduction in non-academic staff and back-up resources to assist research.

"This has quite a telling effect on morale, particularly in the arts and social sciences, where although university teachers are obliged to undertake research, many of them incur a good deal of personal cost in meeting the expenses of research projects for which the university has never been able to provide the full cost."

Members of these faculties are always unfavourably placed in this respect by comparison with members of faculties like science and medicine, which draw more readily on the support of the research council, and which, of course, are generally much better placed in terms of staff-student ratio.

The survey showed that seven universities had about 326 posts for technicians and other non-academic staff left vacant on an economy measure.

One vice-chancellor was at odds with his colleagues. Dr S. L. Bragg (Brunel) wrote: "When times are hard we ought surely to be concentrating our efforts on what we can do and not on what we could have done had we been easier. Universities are supposed to be one of the country's major resources of intelligence and, given clear and consistent objectives, we ought to be trusted to get on with the job."

"Indeed if life was always easy the need for universities like Brunel,

in the council's scientific responsibilities.

Dr Henderson emphasized that HIRC was not concerned with the day-to-day affairs of the individual councils. Its chief importance was the insight it provided into the pre-occupation of the councils with their future.

It is nearly three years since the Rothschild reorganization of civil research, and the research council system is only just settling down under the new arrangements. Sir John Gray emphasized this week at an MRC press conference that what was needed was a period without interference.

It is understood that Mr Reg Prentice, when Secretary of State for Education and Science, gave the councils an assurance that they would enjoy a period of stability, but Mr Mulley has made no such promise publicly.

The research councils are among the chief threats to stability:

- funds declining in real terms;
- so much financial support from customer departments that they become virtually a research arm of government (the Ministry of Agriculture finances 55 per cent of the ARC research budget and is believed to be eager to spend much more with the council);
- many people within Whitehall and within the councils would like to see a single research council responsible for all DES scientific research. The threat to the ARC would be absorbed by MARS, the MRC by the DHSS and the SRC and the NERC would be combined as one council on the new site at Swindon.

HIRC's chief role is to maintain and preserve the freedom of the research councils. Dr Henderson said this week there were no indications that drastic changes in the system would take place in the foreseeable future.

University grant levels unlikely before Christmas

The universities are unlikely to learn their grants for 1976-77, the final year of the present quinquennial, before Christmas, 1975, sources close to Government were saying this week.

It was clear from Mr Healey's speech in the Commons on Monday that in all probability educational expenditure will have no growth in real terms in the next two or three years.

Mr Healey said: "The outcome of the current review, which is bound to require a new look at priorities for public spending, will be announced when completed later this year."

He was confirming Mr Mulley's speech two weeks ago when he warned that it would be best to assume, for planning purposes, that there would be little room for growth in real terms in the next few years.

Figures published in Hansard last week show that expenditure per head of population in 1974-75 was £99 for education, £127 for social security and £73 for defence. The increase since 1970-71 in real terms was £20 for education and social security and £4 for defence. Greatest increase was in housing at £37.

Lukewarm response delays student letting changes

Low returns make students a poor investment—finance don

by Alan Cane
Finance Correspondent

Much of the £1,300m spent annually by central and local government on higher education is economically unjustifiable and should be cut, a senior financial specialist says.

Professor Alan Morrett, visiting professor of finance at the London Graduate School of Business Studies, says the level of return to the community obtained on investment in a university education is ludicrously inadequate.

"My own estimates are that the total cost (at 1972 prices) of a university education was around £10,000, including capital cost, interest and taxes. Taking the cost of support from parents and earnings foregone at school and university into account, the total was some £15,000."

He says: "The level of return on this sum as represented by the additional earnings of the university educated is even on average less than 7 per cent in real terms, after allowing for inflation. The return in the shape of additional taxes received back by the community from these higher earnings and in return for the enormous *ex gratia* provision of £10,000 (probably in excess of £14,000 at current prices) is substantially negative in that only a fraction of the capital cost is ever recovered."

Writing in *The Times Educational Supplement*, Professor Morrett proposes that educational provision should be based on high economic and cultural return. He suggests:

- state aid for university students should be limited to those taking subjects with an economic rate of return greater than 20 per cent;
- provision for all other students to be cut to one-fifth of the present allocation and awarded strictly on merit.

Local authority money squeeze threatens two adult colleges

by Sue Reid

Two adult education colleges in the Midlands face closure later this year because their local authorities cannot provide the money to keep them open.

Attingham Park, near Shrewsbury, is to close at the end of November as Salop County Council will not give it financial help to continue, and Humbercombe Manor is due to be closed by Buckingham County Council in December.

In Attingham's case appeals for a national grant have been unsuccessful. The Department of Education and Science has made it clear no aid will be forthcoming and the cause of supporting the independent residential college rests with the Salop Education Committee.

During the past 18 months renewed approaches to local authorities for support from Salop County Council, which provided £36,660 in 1974-75, have been unsuccessful except in one case. Lord Boyne, chairman of the governors, says reserves will be eliminated by the operating deficit of the college, if allowed to continue, would begin the next financial year with an overall deficit of £2,000.

The governors have said in the past that it would be unreasonable for them to attempt to "carry on" for the county council to make any special effort to do so until the attitude of the Government was clarified. But a question raised in the House of Lords by Lord Bridgeman, another governor, outlining the plight of Attingham resulted in Lord Crowthurst, Minister of State for Higher Education, underlining Salop County Council's responsibility.

When Sir John Langford-Holt MP for Salop raised a question in the House of Commons, he was given a similar answer by Mr Fred Mulley, Secretary of State for Education and Science.

The offer of a £21,000 grant by Salop County Council to cover the year will not be enough and appeals for support from well-wishers and users have not been successful.

Humbercombe Manor, in Buckinghamshire, has a slim chance of reprieve. Although the local authority says the college faces a deficit of between £15,000 and £20,000 this financial year and must close, Buckingham County Council may buy the premises as a residential centre for Slough College of Technology.

Fircroft College, Birmingham, is a third adult education college under threat of closure although any shutdown is likely to be only temporary. After weeks of student unrest the college may be closed next term while its future is examined.

CNAAs report brings help for Mr Miller

by David Walker

The Council for National Academic Awards has reported favourably the Polytechnic of North London helping the position of its director Mr Terence Miller, who is being reprimanded by a government committee of inquiry into its conduct.

It is understood the group have considered setting up a "watchdog" to monitor Mr Miller's decisions. At the same time the academic structure now approved by the CNAAs will effectively end some members of staff calling him a "man of straw".

The report on Mr Miller's conduct, written by a committee under Eric Stockdale, will not be official, seen by most of the government's next scheduled meeting in November. It is likely to be some means of keeping a watch on him, perhaps through informal code of conduct.

Mr Miller has also been filled by events outside PNL's sphere of London University met last Wednesday. There the nomination of Professor E. Lefevre, of Queen Mary College, the governor was deferred to autumn at the instigation of the academic staff.

Professor Lefevre is understood to have been marked down in some way as unfriendly to Mr Miller.

London University nominated members of the court of governors of the PNL.

The CNAAs report and accompanying letter follow very closely recommendations made by the Polytechnic in recent months. The committee have also been asked to help the education officer of the LEA, and will be considered by the last meeting of the joint advisory committee of the LEA and the polytechnic which is due to meet in November.

The new faculty and staff boards, which have been set up, are not the CNAAs' recommendation, although some minor adjustments have been made. The PNL's organization and structure were criticized.

Difficulties linger in the studies department at PNL, understood that Mr Miller has made some drastic decisions about the department at a meeting on June 23 which was taken up by consideration of Miller's own action in leaving the Department of Education and Science to take on the academic board.

Scots seek meeting on devolution

The Scottish universities are seeking a special meeting with the Scottish Government to discuss the special responsibilities for devolution.

At a recent meeting of the university council it was decided they should set their views to the Government in advance of the White Paper on devolution.

Preliminary negotiations at a meeting are under way between the University of Edinburgh and Mr. Garry Fowler, Minister of Education and Science, and Mr. Short's devolution team.

Queen's University has new head

The senate of Queen's University, Belfast, has appointed as its next vice-chancellor and president Professor Peter Froggatt, professor of epidemiology and dean of the faculty of medicine since 1971. He succeeds Sir Arthur Vick on October 1, 1976.

Professor Froggatt, who was an undergraduate at Trinity College, Dublin, has experience of both general practice and of industrial medicine. He is a fellow of the Royal College of Physicians of Ireland, a member of the Royal College of Physicians (London) and a foundation member of its faculty.

A similar clause was agreed for

Polys face stifling of staff growth and improvements

by Alan Cane

Polytechnics must expect a significant deterioration in the staff-student ratios and limited opportunities to improve the quality of their institutional life, according to a survey carried out by *The Times Higher Education Supplement*.

It seems likely that student numbers will rise between 7 and 9 per cent nationally in the polytechnics next year, but that staff numbers will hardly grow at all.

In three of the five London polytechnics, staff numbers have been cut by a total of 47 by the Inner London Education Authority. For South Bank Polytechnic this means a cut of 3.8 per cent to its academic establishment. Mr. Vivian Partridge-Medford, the director, comments: "It was expected that this would be achieved by our not filling vacancies as they occurred rather than by any planned system of reductions in those departments best able to accept them."

Not surprisingly, the movement of staff has been least in these least hard-pressed areas and some reductions have inevitably had to be made in other departments where reductions are not justified by either the student numbers or the overall workload.

"Inevitably, this will affect the student intake in 1975-76. Some departments whose courses are in high demand will have to limit their intakes accordingly."

At City Polytechnic, where there has been a cut of 12 teachers and five research staff and where student targets for 1976-77 have been reduced by 100 full-time equivalent students, Dr. Arthur Sudbury, the provost, comments: "We are being forced by the LEA to reduce the establishment of teaching staff in spite of the fact that in arts and social sciences, but staff student ratios are at the level recommended by the pooling guidelines."

In the arts and social sciences, the greatest, accuracy and taxation, the pressure of demand for places is such that student/staff ratios are running at 17:1 and expansion has to be restricted because of the pooling guidelines.

Most polytechnics have suffered cuts in their proposed budgets. Brighton Polytechnic, however, was awarded a real growth rate of about two per cent.

The amounts lost from budgets of

Outside London, staff posts do not seem to have been cut, but many are frozen. Dr. Maurice Atton, vice-chancellor of Sunderland Polytechnic, gave a representative reply: "Within the polytechnic all posts are frozen in that the rector must give permission before any post can be advertised. Before an advertisement appears, all heads of departments are asked whether any of their staff can undertake all or part of the work envisaged for the new member of staff."

Across the country it seems that the staff/student ratio averages out at about 7:1 for the polytechnics, although there are great variations between polytechnics and departments within polytechnics.

All the polytechnics who took part in the survey make clear how difficult it is to analyse polytechnic statistics, or to compare one polytechnic with another. On the question of comparing universities with polytechnics, Dr. Atton wrote: "I do not see you can make a comparison between polytechnics which further cross-comparison with universities, I would suggest, is very nearly impossible."

The chief difficulties are:

- The London polytechnics are financed differently from the rest;
- There is no general agreement on a formula for estimating FTE students;
- There is no comparison between the numbers of back-up staff at universities and at polytechnics;
- Polytechnic finance is much more complicated than the universities' block grant system.

But polytechnic directors felt able to comment on the development of Government policy as indicated in the speeches of Lord Crowthurst, although all are clearly anxious about the development of their institutions.

On the question of student targets, Mr. Partridge-Medford wrote: "It is virtually impossible to answer this question until some further indication is given of the level of financial support forthcoming."

Dr D. L. R. Gouffrey wrote: "I believe that we must improve staff/student ratios but I would much prefer it to be done by increasing the number of students in many of our courses, notably science and engineering which are under-served, and this will require national action by the Government and by industry."

University dons trapped by £6 limit

by David Walker

University teachers will get an additional £6 a week on top of their arbitration award agreed last month, instead of the expected extra 20 per cent, according to nonconfirmed reports this week.

The rise, in accordance with the Government's new pay norms in the battle against inflation, would mean an extra increase of just over 11 per cent for a lecturer and about 3 per cent for a professor on the average salary of £8,967.

Including an overlapping threshold payment of £83, the Government's decision would give all university teachers an extra £400 a year, increasing the starting salary for a university teacher to £3,173.

The Association of University Teachers disputes the interpretation that the Government is said to have put on the Government White Paper which would bring the settlement of the outstanding part of the pay claim within the new pay code.

Mr. Laurie Sapper, general secretary, argues that the cost of living payment fell within the arbitration tribunal's findings and so accepted the Government's deadline for its anti-inflation policy.

The award pushes the university teacher ahead of the polytechnic lecturer at most career points although the starting grade of most polytechnic teachers, lecturers 11, remains £1,065 above that of the university teachers' starting point. The whole of the polytechnic principal lecturer grade is now beneath that of the university senior lecturer by roughly £200.

This apparent restoration of the differentials which existed before the Houghton Report late last year on non-university teachers' salaries is justified by the AUT, according to the findings of the arbitration tribunal.

The tribunal said explicitly that differences in work market recognition and followed the AUT's submission to it in emphasizing that university teachers had in undergo strict protection unlike polytechnic teachers. It concluded that the points on the respective pay scales were not comparable.

"It is neither appropriate nor practicable to attempt to maintain a direct link between the range from lecturer to senior lecturer in universities and from lecturer 11 to principal lecturer in polytechnics," it said.

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Exchange rate favours Britain

Twice as many British students study in France as part of their degree courses as do French students in Britain because of different financing and admission arrangements in the two countries.

The two systems are outlined in recent reports by the British Council and the French Government's Office National des Universités. Both show that last year, 1,600 British students were enrolled in French universities and 250 French students in British higher education, with some 492 in private institutions.

French students must come through the UCCA system, while British students had, until this year, automatic access to French institutions. British students have their grants as well as the benefit of the French system of indirect subsidies to students, but French students in Britain must pay the full economic rate for food, accommodation and travel from their own pockets.

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Physics innovations 'need DES funds'

Innovations in university physics degrees continue without government funding. Dr. Clifford Butler, director of the Nuffield Foundation, told the international conference on physics education in Edinburgh on Wednesday.

Studies of subject content issues that fell outside the remit of the Science Research Council, such as the Nuffield Foundation, were giving "pump-priming" grants, but, desperately needed, some modest support. The financial difficulties of universities were forcing made it impossible for them to continue with this indefinitely.

The chronic shortage of mathematics and science teachers could mean the end of physics as a subject in its own right in schools before the end of 1976, Dr Butler said.

The trustees of the Nuffield Foundation have appointed Mr. John Moddax to succeed Dr Butler as director from October 1. Mr Moddax was formerly editor of *Nature* and was an assistant director of the foundation from 1964 to 1966.

Inquiry into students on the dole

by Alan Wood

An inter-departmental inquiry had been set up to examine urgently the whole question of students' claims for unemployment and supplementary benefit, said Mrs. Burgess Castle, Secretary of State for Social Services, in a Commons written reply.

She said the number of students claiming supplementary benefit in the vacation had increased very rapidly in the past two or three years and was placing a great strain on local social security, unemployment benefit and employment offices, particularly in the short vacations. This was a matter which needed careful consideration.

She was replying to Mr. John Cunningham (Whitehaven, Lab.) who drew attention to the increasing number of students claiming supplementary benefit during vacations.

Mrs. Castle said figures released last week by the Department of Employment showed that in Great Britain in July 14 some 92,000 adult students on vacation were registered for employment. A substantial number of these would be claiming supplementary benefit.

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Council's praise gives PNL big lift for its 'second lap'

by David Walker

The favourable report from the Council for National Academic Awards has set the Polytechnic of North London off well on its second lap, Mr. John Diamond, chairman of the governors, said last week.

He said: "Mr. Terence Miller, the director, has played a part in the progress but cohesion in the polytechnic has also grown. The advances are due to a new teaming-up within PNL."

"We wish to endorse the CNA's tribute to staff at all levels in the polytechnic for their positive contribution towards the achievement of a co-operative approach to solving problems and towards the creation of a polytechnic identity."

The CNA endorsed the findings of its visiting party and in its report, which was delivered to the PNL and the Inner London Education Authority last week, praised the changes in the running of the polytechnic and the progress in improving physical facilities.

The report said: "It was felt that the council's critical report in 1973 reinforced with the constraints imposed by the current economic climate had probably been a factor in causing the PNL to mature as an

institution rather more rapidly than might otherwise have been expected and that there were definite signs that an academic community was being created in an environment which had become more conducive to the conduct of degree level work."

On the changes in academic structure, which have broadly involved devolution of power to the faculties and a different composition for the academic board, the CNA said the benefits of the clear structure would become apparent in decisions and policies within PNL.

"Members of the visiting party were most encouraged to note that the terms of reference of the faculty boards had been strengthened by the academic board's decision to delegate to them responsibility for, among other things, the control of courses in the faculty, the coordination and deployment of resources and the development of new courses and research."

The report dealt with the rather ambiguously defined scope of the director's powers. It welcomed the transfer of power from the establishment sub-committee to a committee answerable to the academic board. This would diminish the direct power of the director and his deputies.

"While recognizing that the establishment sub-committee per-

formed a very difficult task in a contentious area members of the visiting party commented on the dangers inherent in the polytechnic's interpretation of the broad general terms in which the functions of the director were stated in the articles of association to give this specific and exclusive power to the director; they felt this mode of interpretation could lead to potential and unnecessary conflict."

Commenting on the report Mr. Jeff Ruscello, president of the students' union at PNL, emphasized the CNA's reservations about the size and difficulties of lack of space. Accommodation for students was a pressing problem, he said.

Dr. J. Leicester, deputy director, said the PNL had a more collective look than a year ago. The morning was now ready to go and next term would be the testing time for the polytechnic.

Looking ahead, Mr. Diamond, who hinted that a small group of governors would keep a close watch on decision-making in the polytechnic in future as a kind of cabinet, said there was a palpably different spirit in the polytechnic.

"It is a bit of a mystery to me why Lord Amman wrote his letter to *The Times* although he is free to express his views. But was he fully informed about all the difficulties we faced?"

New regulations will control future teacher training

by David Hencke

Existing teacher-training and further education regulations are to be replaced by a common system from today.

A new circular, 5/75, the Further Education Regulations, 1975, means the end of regulations governing the university-based area training organizations and lays the foundation for new regional committees.

No date has been fixed for the introduction of regional committees but the Government hopes that universities will continue co-ordinating in-service and initial training until they are established.

The teaching regulations which lapse cover the constitution and functions of area training organizations; the duration, standards and academic supervision of courses of initial training and the eligibility of students for admission for training.

The Government is amending the regulations relating to Qualified Teacher Status. These will now include a person who has successfully completed a course for a Bachelor of Education degree or Certificate of Education or comparable qualification, of a UK university or the Council for National Awards which has been approved by the Secretary of State as a course for the initial training of teachers.

and who has been accepted by the Secretary of State as a qualified teacher.

The circular says the Government is consulting groups on proposals made by the Council of Local Education Authorities for new regional machinery.

Provisions of the new body would cover the work of existing Regional Advisory Councils for Further Education, advise on the provision of courses of initial teacher training, co-ordination and review of service training for teachers and an improved system of education.

Training and board fees, which were prescribed under the teacher training regulations for college of education courses, are extended to all courses which receive mandatory awards.

The cost of teacher-training courses between four and six years is now to be covered by public funds, which means that four or five-week courses will need DES approval.

Equipment grants under £250 will no longer require DES approval.

Finally, the 100 per cent cap grant, which previously applied only to Goldsmiths' College, is extended to all non-denominational institutions provided the grant is for a building which will not revert to denominational use.

Universities expect rise of 2,000 in 1975 entry

by Alan Cane

All the signs now are that there will be at least 2,000 more students entering the universities in October 1975 than entered in October 1974. Because fewer leave than enter, there could be an additional 10,000 students next year.

This is the figure vice-chancellors have been quoting pessimistically for the last year in emphasizing the problems which continuing economic recession will cause; now it is clear that applications from home candidates to the Universities Central Council on Admissions are up broadly by 2 to 4 per cent.

This reverses the trend of the years since 1971, when total numbers of applications from home candidates have been falling.

It also seems clear that the increase in applications to large universities could be expected on the basis of spagroup projections. The 18-year-old population is larger this year than last, but the increase in applications is proportionately greater.

Applications from overseas are also higher this year. The biggest surprise, when applications seemed to be tending steadily towards vocational courses, is that the medical sciences—perhaps the most over-subscribed of all university courses—are showing a fall of about 1.3 per cent, which means about 1,000 applications less (applications are not equal to candidates because each candidate can make more than one application).

A further surprise is that there seems to be an upturn in engineering sciences—again against the trend. Applications for engineering seem to be up about 1 per cent—again an increase of about 1,000 applications.

Social sciences also seem to be up, by about 0.5 per cent. Other subjects—pure sciences, arts and vocational courses—such as architecture—seem largely unchanged from last year.

Nevertheless, if the data for applications to all universities between 1971 and 1975 are considered, it is shown that arts-based applications have risen by about 2 per cent, while science and technology applications have fallen by about 6 per cent. In the same period, applications for medicine rose by 6.7 per cent. The average figure for the increase in applications between 1971 and 1975 is 4.9 per cent.

A survey of individual universities by *The Times* Educational Supplement hears out the national picture.

● Surrey University reports applications jumping from 4,900 in 1974 to 5,700 this year, with applications for science courses up about 12 per cent and for French by nearly 50 per cent.

● Applications for science places at Birmingham University rose by about 1,000 although they remained the same in other subjects.

● Salford University showed an overall increase of 14 per cent with 15 per cent increases in chemical engineering, mechanical and aeronautical engineering (both 7.5 per cent) and 18 per cent in economics.

● Leeds University said their overall applications were slightly down but the take-up of unconditional offers had doubled. The chief fall had been in the heavily over-subscribed areas such as medicine and law.

Experts on application numbers stressed this week that the figures at this stage should be treated with reservation, for the situation was fluid and changed daily. Nevertheless, there can be little doubt that the numbers of applications are rising and that the universities will have to cope with large numbers of additional students next year.

One university administrator said he believed that reports of students turning away from the universities had been based on a misunderstanding of the figures.

Pioneer federal 'Rethink siting plan approved of industry'

The Government's approval of a new plan for the location of industry, Professor Peter Hall, of Reading University, has advocated. He told a special seminar organized by the Warrington New Town Development Corporation that instead of industry being linked to coalfields, ports and the main markets it should be sited near universities where information needed for scientific, technical and managerial development is available.

Professor Hall maintained that this trend was already well established in America where firms, especially those connected with the service industries and various forms of research, were choosing locations near universities and cities.

The ideas put forward by Professor Hall were highlighted in a three-page advertisement in last week's edition of *The Economist* which claimed that Britain's closest parallel to the American situation was Birkbeck Park campus development in Warrington.

Hara, said the advertisement, the headquarters of the United Kingdom Atomic Energy Authority were already sited employing 4,000 people from Warrington. It added that the 75-acre landscaped site, soon to have golf and conference facilities, was at the centre of a circle containing Britain's highest concentration of technically oriented learning.

The merger creates a new federal voluntary institution consisting of the University of Warrington, the college, Whitehead, Anglican, Southlands, Methodist, and Froebel, an undenominational college.

The DES has agreed that each will keep its own principal, an academic board and will have wide control over accommodation, student entry and appointments.

The institute will be offering new degrees validated by London University from September. These will include a bachelor honours degree, to allow on a course unit basis, to allow a wide choice. A Diploma of Higher Education will also be offered.

The course, which provides the chance to study the way in which modern British culture and society have emerged since the seventeenth century, embraces both "high" and "pop" culture.

English literature, history and sociology are the main subjects with emphasis on the integration of these subjects. It is hoped students will suggest ways in which cultural development can be studied.

The first year involves the study of the methods of literary criticism, history and sociology, using both seventeenth and twentieth century material. In the second year students are expected to study cultural analysis related to post-industrial culture and society and popular fiction and mass media.

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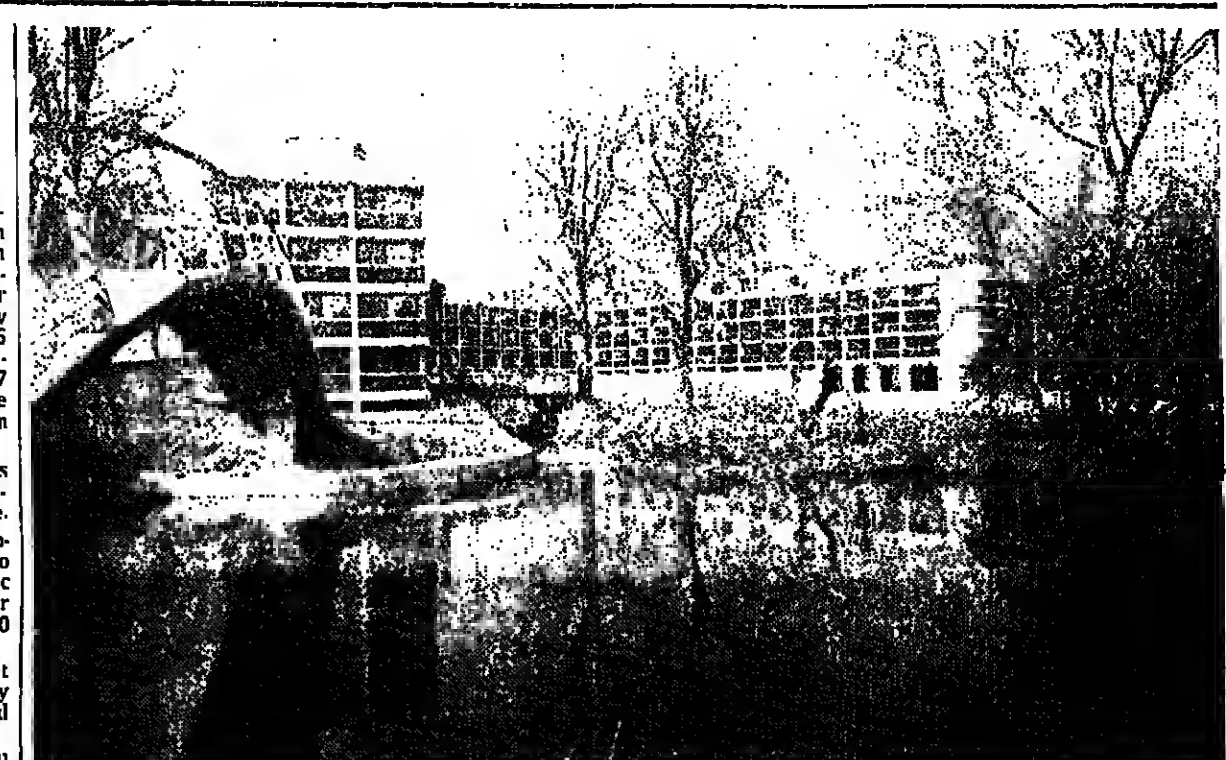
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Wolfson College, Oxford, was one of three university winners of the 1975 Royal Institute of British Architects' awards. Warwick's arts centre and Leicester's library were the other two.

Councils fear threat to poly control

by Mark Vaughan

Many local authorities feel that their control over the polytechnics and other higher and further education colleges is threatened by a new circular from the Department of Education and Science.

The Association of County Councils felt so strongly about it that they have sent the document back without any comment, which they had been asked to give, saying they did not see the necessity for a new circular. They have asked the DES for a special meeting to discuss it.

Because of the current economic climate the association is to emphasize the authorities' need to maintain existing involvement in these institutions, some of which are considered "profligate".

The polytechnics on the other hand, while expressing reservations about the large number of institutions which the circular refers to, seem to welcome the bias it has towards them.

The circular is still confidential and in draft form but is certain to be published later this year, with possibly a few changes. It gives guidance on the government and conduct of polytechnics and other institutions of higher and further education, and covers some 500 colleges as well as the 30 polytechnics.

A number of local education authorities are particularly annoyed at the DES's change of emphasis in the composition of governing bodies. One local authority spokesman pointed out that former notes of guidance allowed the L.E.A.s to have up to just under half the membership of the governing body, the remainder being made up by the polytechnic staff and outside interests. The new draft confirms the authority that in the past year or so, still have a minority of members, but advocates "about one-third of the total".

The spokesman said local authorities were also likely to object strongly to another clause which they felt gave greater autonomy to the larger institutions, particularly the polytechnics.

The draft says: "The powers specifically designated to the governing body of the institution should be subject only to the other provisions of the articles (of government) and not to the authority's standing orders in general."

Since local authorities have their own rules and regulations for governing their financial procedures, many of them are not going to happily accept the department's suggestion that one of their own institutions—a polytechnic for example—should not be subject to the authority's standing orders. "A substantial number of L.E.A.s are going to resist any further inroads into their control of their own institutions," said the spokesman.

It is also known that a number of authorities have taken exception to the draft being sent to teachers' organisations before it has been finally agreed by the department.

Some observers see the new circular as a "holding operation" by the DES, or a reminder to the new education authorities which came into being last year. There is no doubt that many chief executives and non-educational officers have taken a corporate management (which was a novelty, arrived in April last year) as meaning they should have a much greater involvement and control of their education service.

"They treat education as if it were a branch of the sewage department, and start doing things which the old education officer would never have dreamed of," commented one polytechnic head of department. "The DES knows it has a responsibility to stop this happening, and this circular is simply reaffirming the Weaver principles."

A spokesman for the committee of Directors of Polytechnics said: "A document of this kind can't possibly cover the whole range of polytechnics and other institutions of further education. We feel that the problems of the polytechnics are rather different and that this should have been recognized in the draft."

One polytechnic director said he felt the draft did not go far enough in openly supporting the polytechnics. "Many of us feel that there ought to be a clear statement giving freedom to the polys to make their academic plans," he added that one-third L.E.A. membership of a governing body was "unacceptably high". In London it is about one-fifth, and it seems many polytechnics would like to see a compromise between the two.—TES.

University expansion worth two steelworks

by Frances Gibb

The planned expansion of Sheffield University from its present student number of 7,000 to 10,000 by 1981 would attract to the city between £20m and £25m, the committee on the expansion of the university notes in its report published this week.

The expansion of higher education could be as advantageous to Sheffield as the establishment of two new steelworks, it says. University salaries and wages, which account for about 70 per cent of the university's turnover, would be mainly spent in Sheffield.

"By the early 1980s, the planned expansion would add about £8.5m annually to the present salaries and wages bill of the higher education sector—equivalent to the payroll of a large steelworks."

The committee's findings came after more than a year of gathering evidence from members of the university, the city, the media, local government, educational, trade and other organizations, local residents' groups and individuals.

It was set up under the chairmanship of Dr. W. D. Pugh, warden and former managing director of the English Steel Corporation, to "investigate and report on the effects of student numbers on the university remaining constant

university convocation had passed a motion advising no further growth. It concludes that demand for university places, for graduates and for research are sufficient to sustain further expansion of the university to 10,000. It would then be in a better position academically and physically to expand further, not as the national situation demanded. If student numbers remained constant, the continuity as a whole and the university in particular would be poorer.

The arguments on academic grounds for expansion are that a balance of subjects cannot be achieved unless there are 10,000 or more students. "A static situation may well lead to stagnation, as new developments can only proceed if accompanied by contraction in other areas."

Comprehensive expansion is envisaged in the areas of adult education and post-experience courses. In this, universities and polytechnics have complementary roles, it says.

A growing feeling that an adequate university education could not be achieved in three years might lead to a growth in postgraduate numbers and to longer courses. To meet these possibilities, options had to be kept open by planning for growth.

The report says that present buildings provide for about 7,000 to 8,000 students. It emphasizes that

cannot be expected to provide new buildings while present ones are not used to capacity.

"It means that academic standards and morale would be threatened if expansion proceeded without the appropriate increases in staff. The UGC wanted to match resources to the size of the university and argues that the university will be better off in terms of resources if it does not expand very rapidly."

On the social effects of expansion, the report concludes that the local community need not be adversely affected, but warns that each development must be undertaken only after the "most serious appraisal of its consequences".

One of the major fears about the effects of expansion is the scarcity of student accommodation. The report emphasizes that the university plans to buy no more than 50 houses a year, a small proportion of the total stock. The university is in a position to buy some large properties which otherwise would be converted for multi-occupation use as offices.

The housing problem might be eased by growth in the number of mature students who usually live locally, and by spreading student accommodation in a wider radius from the university, it suggests.

The report has been received by the council of the university but will not be approved formally until comments have been received from the various departments.

'Enforce grants for disabled' £100 a head for education

by Frances Gibb

Mandatory grants should be available to disabled students who want to pursue a course of further education, the National Union of Students recommends in its submission to the Warnock committee on special education.

"It is not always the case that further education students receive a mandatory award, and maintenance awards are not normally available for 16 to 18-year-old students."

Yet disabled students often had to live in special accommodation away from home, or needed to pursue courses that did not merit a mandatory award. The additional cost involved could prove a barrier to a student's benefiting fully from his course, the NUS says.

It welcomed the additional grant to enable students to help pay for equipment and other items required because of handicaps, but urged that it be increased.

Colleges which cannot immediately afford to adapt their buildings should at least try to provide the less expensive aids, such as typewriters, tape-recorders.

In higher education, the NUS hopes the University Grants Committee will ensure that programmes for improving physical access to universities and polytechnics will continue in the light of the recommendations in the Chronically Sick and Disabled Persons Act, 1970.

● The Council for Educational Advancement for more supportive services for the handicapped in its evidence to the Warnock committee. There should be more in-service training for teachers in special schools and more trained, non-teaching staff to help them. Better care and services for the parents and families of the handicapped should be provided, it says.

£100 a head for education

The education services, libraries and science will cost each man, woman and child in Britain about £100 this year, according to figures revealed in Parliament recently.

By 1981, it is estimated, there will be at least one educational employee for every 26 people, with a total of nearly two million teachers, academics, researchers and auxiliaries.

On both scales the growth in education has been enormous and is still growing. Spending on education, libraries, science and arts per head of the British population in real terms fell by £20 between 1970 and 1975 as against £8 for law, order and protective services and £9 for roads and transport.

By 1981 a research team at the Department of Employment estimated that education will have added nearly 550,000 people to its payroll in 10 years. No other sector of employment will have grown so fast though health, with an estimated total of 1,340,000 employees in 1981, will come close.

By 1981 6 per cent of those in jobs will be in work associated with education.

Per capita public expenditure in the United Kingdom

1974-75 1975-76 Increase, since 1974-75 prices

Defence 73 +4

Trade, industry and employment 51 +16

Law, order and protective services 72 +37

Education, libraries, science and arts 25 +8

Health and personal social services 59 +20

83 +18

127 +20

A-level passes cluster in pure science subjects

by Alan Cane
Science Correspondent

Pure scientists seem best suited to amassing large numbers of A-level passes while social scientists find it hard to pass more than one subject, according to Government statistics published this week.

They show that of the 18,880 pupils who passed science subjects including mathematics in 1973, 75 per cent achieved three or more passes—almost 20 per cent achieved four or more.

By comparison of the 7,970 pupils taking social science subjects, only 6 per cent achieved more than two passes. The greatest proportion, 70 per cent, had only one pass. Social science subjects are defined as British constitution, economics, English economic history, general studies, geography, political studies, psychology, sociology and vocational subjects.

Of those pupils taking science without mathematics, more achieved two A level passes or more than achieved two A level passes or less, while of those taking arts subjects, fractionally more achieved two A level passes or more than achieved two A level passes or less.

Of those pupils taking science with mathematics, more achieved two A level passes or more than achieved two A level passes or less, while of those taking arts subjects, fractionally more achieved two A level passes or more than achieved two A level passes or less.

Of the artists, as with the social scientists, the largest single proportion of pupils achieved only one A level. Of the scientists, whether taking mathematics or not, the largest single proportion of pupils achieved three A levels.

The statistics also show that for every 17-year-old school-leaver going off to take a polytechnic degree course in 1972-73, there were six 17-year-old school-leavers going to university.

The figures also suggest that the polytechnics recruit a proportionately larger number of students from the state system. Of the total school-leavers who left the state system to go to university or polytechnic degree courses, 28 per cent went to polytechnics. The comparable figure for the grant-aided independent schools was 20 per cent.

The statistics show that roughly twice as many girls left school in 1973 with one or more A level passes than in 1963. The improvement for boys was rather less, giving an overall increase of the ten-year period of about 70 per cent.

There were 416,000 school-leavers in 1972-73 of whom 105,000 had A level passes, about 15.7 per cent of the relevant age group. The results data show that ancient history, Latin and Greek top the list for passes as a percentage of entries; 94.2 per cent of all candidates taking A level Greek passed and of these almost a quarter achieved a grade A. Bottom of this list was British economic history where only 54.4 per cent of candidates passed and a mere 4.5 per cent achieved a grade A.

For the second year running there was a slight decline in the number leaving for degree courses. *Statistics of Education*, Vol. 2, 1973, HMSO £3.00.

SSRC to explore how Scotland reacts to oil boom

by Our Social Sciences Correspondent

The Social Science Research Council is to set up a panel to administer grants or research into the impact of oil developments in Scotland.

The establishment of the panel, which will foster new studies and attempt to improve contact between people working in the field, comes after the report of an investigating committee appointed in January found social science work on oil to be very fractional, with uncoordinated effort in parallel areas.

The new panel, which will work loosely under the aegis of the SSRC's new "research initiatives board", will provide funds for research in sociology, economics, anthropology or any other areas with a bearing on the social consequences of oil exploitation off the coasts of Scotland.

With funds of up to £150,000 spread over four years the panel will not pre-empt any research in this area. Academics will still be free to apply to another subject panel of the SSRC for support.

The panel, which will probably be based in Glasgow and composed of Scottish social scientists, is a new departure for the SSRC. Its work is likely to be taken as a test of the new initiative organization of research recently begun by the SSRC.

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the spouse's income (subject to certain disregards), Spouse's Contribution

3. The spouse's contribution introduced in 1974-75 will continue in 1975-76. It is assessed generally on the same basis as for undergraduates starting with a residual income (after various allowances) of £2,200. The arrangements will be reviewed later this year.

Dependants' allowances

4. These will be as for undergraduates, i.e.:

Spouse 380
First child 165
Second and each subsequent child 85

5.

The THES survey on how universities have taken the Government's finance squeeze



Mr Charles Carter.



Sir Samuel Curran.



Mr Frank Thistlethwaite.



Sir Fraser Noble.

Set down on paper the answers are deceptively bland:

"The position here is that in the past year we have 'saved' 105 academic posts and cut our recurrent grants by over 6 per cent in other areas."—Dr R. B. Hunter, vice-chancellor of Birmingham University.

"Academic estimates, after spending accumulated reserves, were cut by 4 per cent, student intake figures were revised, and the number of new faculty posts authorized for 1974-75 was reduced from 22 to 13."—Mr Frank Thistlethwaite, East Anglia.

"Academic posts vacant on June 16 (including part-time)—58. All other posts (including part-time)—81. It is reasonable to assume that the number will increase."—Dr Henry Miller, vice-chancellor of Newcastle University.

But what is disclosed in answers to a survey by *The Times* of the effects on universities of Government policy in the past year, is the story of a relentless deterioration of working and physical standards in all areas of university life.

Since salaries account for up to 75 per cent of budgets, a cut of 6 per cent, as at Birmingham, amounts to a 20 per cent cut in the budget of the disposal of bursars and is bound to hurt.

It has, answers from 20 vice-chancellors, who never deny, shown a strong vein of imprudence, or a strong vein of the frustration of coherent planning by Government co-go policies, as well as a fear that academic standards will be eroded if they continue.

Over the past year most universities have been forced to economize on the maintenance of grounds and buildings, departmental and library grants, books and periodicals, printing and publishing, heating, lighting, cleaning and telephones, entertainment and ceremonial occasions, links with overseas universities, industrial liaison and even gardening.

Durham, by reducing the weight of paper used to print the university prospectus, saved 2p a copy on postage on the distribution of 25,000 copies.

Several universities have been forced to cancel new developments that were planned for the new quinquennial. York is not going ahead with its seventh college; Exeter has lost a new computer building; new schools of psychological sciences and electronics have been put off by East Anglia; and City will not get a new building for its overseas studies department of ophthalmic optics and visual science.

Some new developments are going ahead nevertheless, especially when they are financed from outside sources or from the University Grants Committee. At Hull, for

A story of relentlessly deteriorating standards

instance, Mr S. R. Denison mentioned a new computer, the Wolfson Laboratory for gerontological research, the Institute for Modern Dutch Studies, and a possible degree in nursing.

Several universities were worried about residence. Among the comments were:

"A problem arising from recurrent grant allocations but from high interest rates. This does not affect all institutions equally but very adversely affects those with a high proportion of loan financed residence. Stirling, because of its vintage and its campus organization, is very badly affected."

"All its residences are loan-financed and by the end of the current year deficits of about £250,000 will have accumulated, in spite of charging reasonable rents and utilizing the maximum in vacation."

Edinburgh: "I have always supported a policy of encouraging students, where possible, to live at home. Scotland has maintained this tradition very much better than the rest of the country. But surely the responsibility for finding places for students in live in is by no means with the university alone; some responsibility must surely rest with the local authorities and indeed on the students themselves, now that they are by statute fully responsible people at the age of 18."

"We in Edinburgh have taken some steps towards coordinating efforts in the universities and other institutions in this field."—Professor Sir Hugh Robson.

Durham: "The section of the university in Durham which has probably suffered the greatest problems, and which gives us the greatest concern for the future, is the position of the colleges. Durham provides residential places for 75 per cent of its students and being small cannot afford subsidies when the level of student residence is as high as this, since the amounts involved would be very considerable in proportion to the university's total expenditure."

"The fact that the Government has not been able to fix the student grant or an economic level which would enable them to pay an economic cost for the services they receive has meant that the colleges have been faced with economic problems which have resulted in immense cuts in services and a drain on resources of every kind."

—Mr Ian Graham, registrar and secretary.

Several comments were made about the series of speeches by Lord Crowther-Hunt, Minister of State for Higher Education, not all of which disagreed with all the points that the Minister has made. They included:

"I have been conscious for some time that the relative lack of co-ordinating machinery between the two sectors of higher education under any circumstances wasteful and under present circumstances indefensible. The machinery for co-ordination on the other hand is extremely difficult to devise."—Mr James Drever, Dundee.

"My main impression on reading the speeches by Lord Crowther-Hunt is that a good many universities have been engaged for a considerable time in attempting to do almost everything on which he has spoken where it can be done with any assurance."

"Much of what is said about relevant education depends on reasonably accurate manpower planning and this is still anything but a science. On the other hand we have never failed to place our graduates in employment, very soon after graduation so our own methods of anticipation of demand for graduates have, so far, proved successful."

"Many of the problems faced by universities and polytechnics come from the rather hasty introduction by government of a second sector in higher education."—Sir Samuel Curran, Strathclyde.

Lord Crowther-Hunt seems to be reviving rather old arguments, perhaps without realizing how much discussion there has been of them already.

"I am sure we should look again at the various economy measures, and may get a little more from them; but it would be unwise to let the Government's policy of economic cuts be a guide to the universities and polytechnics."

—Mr Charles Carter, Lancaster.

Lord Crowther-Hunt's suggestions of co-operation and collaboration between universities and other institutions do not fall on deaf ears.

In respect of manpower planning, it is certainly true that students should be encouraged to match their talents to the nation's needs but this, like so many other generalizations, requires to be taken with several grains of salt. I think it is an oversimplification to suggest that scientists can do all the jobs that arts graduates now have.

"It is all very well to do large calculations about staff/student ratios and I am sure that a certain amount could be achieved by means of co-operation between universities, but it is still really difficult to substitute lectures for, for example, Greek and Sanskrit, which are not likely to have many more students, for lectures, say, in mathematics, physics, or chemistry."

"On postgraduate work, all I can say is that the question of whether we have the right balance of advanced work is one that is receiving almost constant attention."—Sir Hugh Robson, Edinburgh.

Other, more general, comments concentrated mainly on the difficulties of planning when policy changes so frequently and on the dangers now facing the universities.

Mr Geoffrey Lockwood, registrar and secretary of Sussex University, made several personal and "impressionistic" comments:

that their sizable accommodation and catering accounts should balance whereas the income into those accounts (drawn from student maintenance grants) has not kept pace with inflation. In other words, the universities are in a request to the universities to take a larger proportion of each student grant which is clearly a recipe for discontent and unrest.

"When that unrest occurs, it rebounds on the universities and their reputations."

"I think many people in universities have felt that the institutions are on trial within Whitehall with no way of putting up a public defence. Lord Crowther-Hunt's recent speeches would seem to be pronouncing the sentence without a defence having been put."

"Two comments as someone who spent a great deal of time developing and publicising concepts of planning and management in universities."

"Any talk of planning no longer causes either the fear or the hope which it used to. These days it is more likely to be laughed. I am not denouncing the fate of planning since that fate stems from the state of the economy over which we appear to have little control, but I would make two points arising out of it."

(a) "The devolution and participation which came with planning in some universities has also gone with planning. The timing and speed of change external to the university (eg. in the student number plans for 1976 and 1981) mean that it is physically impossible to bring participation to bear on the university's response. It is worthy of consideration that the Government and Lord Crowther-Hunt in particular, politically committed to devolution and participation."

(b) "In the absence of planning, universities are being asked to change with little external perception of the internal rigidity. Most outsiders seem to think that rigidity is simply a lack of will within the universities and they fail to see that the research role, etc., are very real constraints on the switching of resources."

"The rate of inflation has outdistanced the techniques used in the planning of the resources allocation to and within universities."

At East Anglia, Mr Frank Thistlethwaite talked of the destruction of plans for growth and the consequent academic imbalance, as well as the time and effort wasted by repeated estimating and re-estimating procedures necessitated by Government policies over the past 18 months.

In common with several other vice-chancellors, he also alluded to the need for realistic student grants to make it possible for accounts that were supposed to be self-balancing in fact to balance.

Sir Fraser Noble (Leicester) added: "What we are confronted with at present is the need to think about the future growth at the same time as we are having to give the most urgent and anxious attention to retrenchment, while we are totally uncertain about the resources that will be provided for the fiscal year of this quinquennium."

At Strathclyde, Sir Samuel Curran said that staff morale was the matter of most concern.

"It seems to me assumed that universities are in some way providing inadequate and no clear indication of the inadequacies is given, while the true facts of the situation would reveal that universities are playing an important part in economizing and are willing to heel how they can do better at a time when they are still grogging."

"The contrast between the criticism that is often expressed in our own country with the high standing of our universities in many countries overseas seems to show that we are failing to recognize that the university sector of our society is playing a most worthwhile role."

Giving to oil rich may deprive poor

by Laura Kaufman

The poorer developing countries might be damaged by contracts to provide educational services to oil-rich countries, university staff said at a conference on universities and overseas development.

Several delegates attending the conference expressed fears and objections to the new Paid Educational Services Scheme (PES).

During discussion Mr H. Dickson, of Edinburgh University, school of engineering science, said that for political reasons he would refuse to work within the scheme. He complained that the Open University was committed to it in many of the staff were very disturbed and would not wish to go to countries to which they went unsympathetic.

Dr M. J. B. Lowe, deputy registrar at Strathclyde University, said: "Working with OPEC (the Organization of Petroleum Exporting Countries) is bound to reduce the pool of people available to help poorer countries. This view was shared by Professor R. W. Sted, principal of the University College of Swansea, who said: 'I hope we will not get overwhelmed by the oil-rich countries and forget the underdeveloped countries.'"

The delegates complained that the scheme would "turn academics into mercenaries" but this was dismissed by another as "nonsense".

Dr Colin Adamson, director of the Polytechnic of Central London, argued that contracts with rich oil-rich countries could generate a surplus which might be used to help poorer countries.

Dr P. A. I. Tahourdin, assistant director-general of the British Council, said later that there were some science places in university departments and that, provided PES did not grow too fast, the poorer countries would not suffer.

25 per cent fall in job advertising

The volume of advertisements for jobs in universities, colleges and polytechnics from January to May fell by 25 per cent compared with the same period in 1974, according to measurements by the market research department of Times Newspapers Limited.

Measurements of three national daily newspapers, two national Sunday newspapers and three weekly showed that the volume of British university advertising fell by 43 per cent compared with 1974. Overseas university advertising was down by 16 per cent and polytechnic advertising down by 16 per cent.

At East Anglia, Mr Frank Thistlethwaite talked of the destruction of plans for growth and the consequent academic imbalance, as well as the time and effort wasted by repeated estimating and re-estimating procedures necessitated by Government policies over the past 18 months.

In common with several other vice-chancellors, he also alluded to the need for realistic student grants to make it possible for accounts that were supposed to be self-balancing in fact to balance.

Sir Fraser Noble (Leicester) added: "What we are confronted with at present is the need to think about the future growth at the same time as we are having to give the most urgent and anxious attention to retrenchment, while we are totally uncertain about the resources that will be provided for the fiscal year of this quinquennium."

At Strathclyde, Sir Samuel Curran said that staff morale was the matter of most concern.

"It seems to me assumed that universities are in some way providing inadequate and no clear indication of the inadequacies is given, while the true facts of the situation would reveal that universities are playing an important part in economizing and are willing to heel how they can do better at a time when they are still grogging."

"The contrast between the criticism that is often expressed in our own country with the high standing of our universities in many countries overseas seems to show that we are failing to recognize that the university sector of our society is playing a most worthwhile role."

Mr Price to be PPS

Mr Christopher Price, MP for Lewisham, West, and Mr Bryan Davies, MP for Enfield North, have been appointed parliamentary private secretaries to Mr Fred Mulley, Secretary of State for Education.

Mr Davies, sponsored by the Association of Teachers in Technical Institutions, will have special responsibility for the arts.

Author please

We would be grateful if the author of the poem "The Academic

Don's diary

Do you read me?

Vacation? Vacation! Here we are now four weeks after the end of term, when those jealous of the presumed easy life of the university lecturer presume further that vacation means four months' holiday.

At the beginning there was the round of part nine marking, and re-marking, followed by examiners' meetings and tutors' meetings and the assessment committee until the results were finally published. And the list of those required to resit or referred in one or two papers only serves to remind us of the further round to come, in September, with again the need—a critical need perhaps in a marginal case where a person's future might be at stake—to re-read papers and agree marks and go through the round of meetings.

In between, the theory goes, there is time to do research. The first problem, however, is to catch up on all the material which has piled up on the desk during the round of examinations, especially when this involves marking extended essays of up to 8,000 words for part two students, as well as the conventional examination scripts.

The second of the extended essay students, to be followed by a third when it was introduced—a change to follow up a topic in some real depth, not to be bound by syllabus and so on—has now it seems that some evaluation and consideration is needed.

Not only is the project demanding for students, but courses have tended to call for extended essays, and work tends to be neglected while the extended essay dominates the students' concern.

And if writing so much has become a strain, what about the reading of it? Forty or so extended essays either first or second marked, and some reconsidered in try to reconcile notes, the number of final papers . . . and then the part one round.

Unfortunately, publishers do not take any account of all this; colleagues seem to be writing slightly fewer letters, and one can tell by 24 per cent compared with the same period in 1974, according to measurements by the market research department of Times Newspapers Limited.

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cient salary when they are supposed to be acting on everybody's behalf in keeping check on the activities of a vast governmental machine. If there was ever a cult of "autism" it was in the ranks of British public life, and it was in Parliament as in the Civil Service, and it is hardly surprising that the results are unimpressive when we try to do the job on the cheap.

No doubt some academics would wish us to give a lead (I have yet to hear whom it would impress, and a few probably maintain the tradition of unconcern for worldly affairs. The majority, unfortunately, or fortunately depending on your point of view, seem to be in touch with the movement of rates and the weekly shopping bill, and seem singularly unmoved by the call to rally to the cause and make sacrifice for the good of the country.

At least the new university can be put in the perspective of industrial history, for the cause of the subsistence was generally thought to be the crumbling of a tunnel which runs directly under the site—the first railway tunnel, built to carry the early Canterbury to Whitstable. The tunnel, it was said, had been taken with the institution of the new generation of universities in the 1960s?

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Things fall apart

This looks like being a quiet summer, certainly in a physical sense, as compared with the summer of 1974. Then the vacation began with cracks appearing in the walls of one of the university's buildings. Indeed, it was far from quiet as, with ever sharper and more ominous noises and snaps, the rooms had to be evacuated and the area was roped off.

In the beautiful sunshine of early July, quite a camaraderie developed as a varied selection of staff came out of their various offices and colleges and watched first the movement of the building, speculated as to its cause, anticipated the spread of the phenomenon, and then watched the demolition men get to work when it was decided that the buildings could not be made safe again.

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LETTERS TO THE EDITOR

Pay scales

from Dr K. J. Heskin
Sir—The comments on my letter in *THE TIMES* (July 4) reveal some interesting points.

It is clear that there is a vocal and powerful lobby in the AUT for the preservation of the differentials between senior and junior academic staff. They must now be feeling fairly pleased with themselves.

Edward Hughes' myopic observation that today's lecturers are tomorrow's professors will give little comfort to those unfortunate at the bottom end of the scale who, contrary to Professor Birch's anachronistic assertions, may well be struggling desperately to look after dependent wives and children. The unfortunate truth in those times of conservatism and austerity within universities is that today's lecturers are tomorrow's professors.

I agree with Professor Birch that more promotion grades are necessary to encourage the industrious, particularly in the age range he mentions. I also agree with Edward Hughes that Bill Wallace has worked very hard for the AUT and I would not wish to thought that my remarks were directed personally towards him; rather, they illustrate, from my own experience, the dilemma in which AUT finds itself in a situation where lecturers need strong and unequivocal trade union support.

However, I find it very hard to believe that academics' penchant for discussion, that no one was prepared to comment upon this fundamental issue of AUT loyalty, it reflects badly upon the profession.

Finally, I am relieved that Mr Ribbins spared us the embarrassment of a detailed reply, since the figures he quoted, indistinguishable as they were, are damaging to his argument about numerical strength as they are irrelevant to my argument about influential strength.

Yours faithfully,
K. J. HESKIN
School of Biological and Environmental Studies,
The New University of Ulster,
Coleraine.

Iranian students

from Dr J. D. Downing
Sir—The liberty and academic freedom of Iranian students in Britain is currently being threatened by the Iranian embassy here, in particular by its secret police (SAVAK) activities.

First, pressure is brought to bear on Iranian students to inform SAVAK against other Iranian students for expressing opposition to the Shah's regime. This pressure includes bribery, threats against students' families. Academic freedom is impossible for Iranian students of whom there are about 7,000 in Britain—under these conditions.

Second, a particular instance of those processes is the refusal to extend the visas of five students because of their public comment here against the treatment of political prisoners in Iran. This obviously affects their capacity to continue their courses here. One such is Mr M. Kalamari, of the School of Oriental and African Studies, in London University.

Third, is the case of 21 Iranian students who currently face trial for conspiracy to trespass, for their non-violent sit-in in the Iranian embassy (on Iranian soil) earlier this year.

Their case presents an odd contrast with the absence of punishment of Ukrainian students who staged a similar protest in the Russian embassy.

I therefore address a public appeal to the Committee of Vice-Chancellors and the Committee of Directors of Polytechnics to exercise whatever influence they can (1) against the developing role of SAVAK in British higher education; and (2) against the barbarous repression which awaits the 21 students as the result of the possible decision of a British court of justice, on the criminal charge of conspiracy to trespass.

Yours faithfully,
J. D. DOWNING
Chairman of the Council for Academic Freedom and Democracy,
Kings Cross Road,
London.

University reform

from Kathryn Rowan
Sir—Of the eight suggestions put forward by Professor Hammetton in his letter (*THE TIMES* July 11) the first five comprise a realistic attempt to deal with some of the implications of the end of university expansion, but the final three cannot be allowed to pass without comment.

Firstly, Professor Hammetton fails to explain his selection of English and philosophy as the subjects to be axed or undergraduate level. Why not history or psychology? Can it be argued that some subjects are more easily self taught than others?

Secondly, since Professor Hammetton is preoccupied in his letter with possible economies it should be pointed out that the teaching of English and philosophy only at graduate level lengthens the university careers of those who wish to study these subjects, and may prove more expensive than at present. The cut-down in undergraduate intake to compensate for this would lead to more money being spent on fewer people. Is the adoption of this principle justifiable?

Thirdly, with reference to his discussion on sociology, although it is generous of Professor Hammetton to allow that "it cannot be ruled

out a priori that there will never be any useful or illuminating outcome of such studies", this utilitarian thread that runs through his argument does damage to the real problem that lies behind it. This problem is central to the status of sociology and can be posed in two unrelated questions:

● What is the purpose of sociological study, or what is the purpose of the conceptual and methodological exploration of theories of society?

● Is it possible to assess sociological worth from a utilitarian point of view?

In response to the first question the aim of sociology should be to induce in the student a critical awareness of society and an understanding, in so far as is possible, of social processes.

In relation to the second question, I suspect that Professor Hammetton's assessment of the worth of sociology is in terms of the degree to which it constitutes a preface to which it acts as an instrument of social change through its influence on policy. That sociology has not yet proved itself as such is no argument for its worthlessness.

The notion of sociology as a predictive and positive science is closely related to the conception of sociology as a "utility" subject with welfare values. Although there is

room for refinement and greater rigour within the confines of this approach, sociology will never justify itself fully within them. Attempts to do so create further grounds for criticisms such as Professor Hammetton's.

The notion of sociology from the philosophical route, the concurred that it should be an applied and practical subject, has inevitably moved it up to criticism as a subject. Unless we can get rid of this pervasive utilitarian ideology and its underlying assumptions of our power, knowledge and right to intervene in society, the real worth of sociology, which is to make people think critically about society will be lost.

I am questioning not so much Professor Hammetton's concern but the basis of it. In place of suggestions seven and eight I think the following questions might usefully be asked: Can we afford to teach people to think in this way? Why is it important to do so? How can we ensure that the effect of the transmission of sociological knowledge is to make students think rather than to reproduce or even conserve knowledge unthinkingly? Finally, should we accept unquestioningly the now established right of intellectuals to be paid in kind?

Yours faithfully,
KATHRYN ROWAN,
Assistant research officer,
Sociological research unit,
Institute of Education,
London University.

Dillon's

from Mr T. S. Yang
Sir—I read the article by Mark Jackson in *THE TIMES* (July 4) "Confidence crisis rocks the University Bookshop" about Dillon's University Bookshop with regret. As an acquisition librarian in one of the university colleges, there are some things I wish to point out.

First of all I do not agree with the explanation made by Mr K. Stephenson, Dillon's new chairman, in which he said that "a major factor in the company's crisis was the large amount owed by its big customers. Among the worst offenders were the universities", but it missed one important factor, he failed to mention why? And when did it happen?

To my knowledge, university librarians have no difficulties in paying the bills or far as their budget is concerned, then how could they become the worst offenders claimed by Mr Stephenson?

Secondly, I can not agree when Mr John Shutter, Dillon's managing director, says that "the defects of university accounting procedures in London and elsewhere do create long delays, or lead to loss of revenue".

My objection to his comment on the university accounting is based on the fact that most universities have transferred their accounts to computers, for instance London has centralized the accounts of all colleges and schools to the university computer since August 1973, since which no complaint has been heard of any drastic delay or payment of invoices.

Furthermore, the University Grants Committee also informed the accountants of all universities to alert any delay of payment and asked them to ensure that the payment practice is in accordance with the best standards within the limits of normal commercial prudence.

Finally, I wish to express that no university librarian would want to cease business relations with Dillon's, but nothing can be more frustrating than one has to spend a whole morning on the telephone checking a wrong order and to repeat the same query to five or six people than to find out that they were all the wrong people and has been dealing with, and having to go back to deal with the first again. Would you blame the librarian if he stops dealing with Dillon's?

Yours faithfully,
T. S. YANG,
Acquisition Librarian,
Queen Elizabeth College,
University of London.

Sixth forms

from Mr Bruce Chippin and others

Sir—Mr David Terry (*THE TIMES* June 11) says he knows of no evidence concerning the size of sixth form numbers. Some of our own as yet unpublished findings may be relevant in this context.

In our national sample of institutions providing 16 plus education we have found positive correlations between size of sixth form and number of A levels offered. In the case of comprehensive and grammar schools the value obtained was 0.55, which suggests an at least modest tendency for smaller sixth forms to offer fewer subjects.

On average the grammar and comprehensive schools contained 32 sixth form students and offered 18 A levels, while sixth form colleges contained on average 419 students and offered 26 A levels. The further education and tertiary colleges contained on average 237 full-time A level students and offered 23 A levels.

No sixth form or tertiary college offered less than 20 subjects, but 23 per cent of the further education colleges offered less than 20 subjects, and 23 per cent of the schools offered less than 20 subjects.

We would interpret this evidence as following to support some of Mr Terry's arguments.

Yours sincerely,
BRUCE CHIPPIN,
DENIS VINCENT,
JUDY DEAN.

Alternatives to the Traditional Sixth Form Project,
National Foundation for Educational Research,
Slough, Berks.

Vice-Chancellor's 'green paper' on the future of postgraduate education

'Places for all qualified students should be the aim'

RESEARCH

The heart of the matter is the universities' responsibility for the maintenance and development of science and learning. At times of rapid social and technological change, like the present, the need for new knowledge, and for the reassessment and reinterpretation of existing knowledge, is greater and not less than in more stable periods.

This is not a mere rhetorical generalization, but a matter of practical observation. It is clear that failure to do the necessary research in new fields of social or scientific concern may have disastrous consequences.

Of course, it is not often argued that research in universities should be discontinued altogether. What is suggested is that at a time of financial difficulty there should be some transfer of resources from research to teaching. If the number of students on undergraduate and taught postgraduate courses increased without a proportionate increase in staff numbers either the quality of the teaching would suffer, or the time available for research would be reduced.

Economies of scale and improvements in the techniques of teaching could provide only limited compensation for what would be lost. In some universities a tendency of this kind is already discernible.

If, for some reason, the postgraduate work, particularly the postgraduate research, were suddenly cut back, the resources liberated would in most cases not be those needed to provide more undergraduate places. The only result would be a significant waste of the total potential of the department.

The present "dual" system by which research is financed in part from the block grant from the UGC, which is expected to be absorbed into a "well-found" department, supplemented by grants from the research councils and contracts from industry, has worked well and economically. We think that any alternative system would be likely to be less efficient. To make these points is not, of course, to suggest that no change in the present pattern is possible.

We have received suggestions that some PhD candidates of insufficient ability are being accepted, and perhaps in some cases are receiving the degree. We think this may sometimes happen because their inadequacy is not recognized in time. If a student has worked conscientiously for three years, to brand him as a failure seems harsh. Accordingly, we think that universities should consider the introduction of a more formal and rigorous assessment of progress, say, at the end of the first year of a PhD course.

In addition, it has been represented to us that while we have an elaborate system of classification of first degrees, which undoubtedly provides an incentive for many able students, we have no such system for higher degrees. We think that universities might consider whether it would be desirable, for example, to give a public mark of distinction to PhD candidates whose work has led to an outstanding contribution to knowledge and exhibits exceptional originality and perception.

The size of the student research awards provided by the research councils is normally related directly to that provided for undergraduates. It takes account of the fact that research students commonly have to be at research in their laboratories or libraries, or in the field for a much larger proportion of the year than the 30 weeks or so for which an undergraduate is required to be in residence. But it takes little or no account of the fact that research students are older, better qualified, more experienced and more capable than the average undergraduate.

In recent years this method of calculation has been particularly disadvantageous to the postgraduates. To an increasing extent, now more or less recognized when the size of their grants is under discussion, undergraduates have supplemented their grants by part-time work in the vacations, or if employment cannot be found, from supplementary benefits.

Those arguments apply mainly to the areas of research covered by the research councils—science, technology, medicine, and the social sciences. The sum of money involved in the support of research in arts and the humanities are very much smaller, but we do not, for that reason or any other, regard it as any less essential. We think that the present system by which studentships in these areas are not allocated to departments but are awarded by a national competition organized by the DES and SED has worked well, and except in one particular, we would not wish to change it.

It seems to us that the financing of research in law, a subject of increasing importance in the universities and one in which a changing society which research is needed, should perhaps become part of the responsibilities of the Social Science Research Council, or alternatively should have a separate organization of its own.

It is clear that in some important respects research in the humanities is seriously handicapped. We have received from a number of quarters suggestions which we think would be worthy of consideration for the foundation of

Recommendations

1. A further "transfer of resources" from research to teaching would be damaging to both and should be resisted.
2. The suitability of all PhD students should be independently assessed at the end of the first year of study.
3. Universities should consider the award of a mark of distinction for outstanding PhD theses.
4. Student research awards should be increased in value relative to undergraduate grants.
5. The present arrangements for supporting research in arts through the Departments of Education and the British Academy should continue, but consideration should be given to a different arrangement for research students in law.
6. The existing proportion of intending teachers qualified in university departments of education should be retained, and the universities should provide more part-time until full-time higher degree courses for teachers and stimulate more research in education.
7. The practice of requiring parental contributions to the grants of students undertaking postgraduate training as teachers should be discontinued.
8. The need for a substantially increased number of places for graduate students of social work should be taken into account in plans for the next quinquennium.
9. The significance and value of overseas degrees are not yet well enough understood by employers and by the general public. Consideration should be given to measures designed to rectify this situation.
10. Information about the amount and nature of self-financed "post-experience" work undertaken by all universities should be collected, and the question of whether a central index of courses is desirable should be considered.
11. An increase in the number of students reading for higher degrees by part-time study is to be expected. The needs of part-time postgraduate students, and the national provision for them, should be discussed with other bodies profiting for part-time students.
12. The universities should continue to provide for a substantial proportion of postgraduate students from overseas. There should be a standard fee for overseas students which would be larger than the home student fees, but not so large that postgraduate study in this country would be more expensive than in Europe and America.
13. Postgraduate students from under-developed countries should continue to be assisted by scholarships or bursaries, which should be open to those not sponsored by their home governments as well as to those who are. Expenditure of this kind should be seen as part of our programme of aid to these countries.
14. The universities' consideration of postgraduate education in the future should be based on the general principle that students who are qualified, suitable and keen to proceed beyond the first degree level should be enabled to do so.

required would not be of the same order as those needed in the other fields. But at a time of great financial difficulty most of us feel that the alternative course of continuing to assist research through the British Academy is to be preferred.

The number of research students in arts and the humanities is comparatively small; in 1972-73 those working for higher degrees totalled 3,777. Most of these students are probably aiming at an academic career in a university or in other educational or cultural institutions. A smaller number may have in mind the Civil Service, or perhaps other administrative work. Looked at from the long-term point of view, the balance between supply and demand is reasonably well maintained.

It is sometimes asserted that, because in most cases it results in no immediate economic return, public support for scholarship in the humanities should not be provided even on the modest scale that it now is. Such a view seems to us totally philistine.

The present output of PhDs (about 5,000 annually, of whom about a quarter are overseas students) is what would be required on the following assumptions: the total system of higher education, and the number of PhDs recruited to staff, will continue to increase at a rate of 3.5 per cent per annum (this is approximately the average rate for the past 50 years); in science and technology, and in some other fields such as economics, PhDs recruited for research and development posts in industry, commerce and government will about equal in number to those recruited to higher education; about one fifth of PhD graduates will be people who do not wish to make their careers in academic life or in research, but will seek employment in what capacities in industry, commerce, or perhaps in other sectors of education or the public service.

A vigorous programme of research in education is equally important.

PROFESSIONAL QUALIFYING COURSES

Similar considerations apply to professional qualifying courses which the universities provide. The largest single group, after the teachers, are the social workers, for whom in 1973-74 there were 1,648 places in one and two-year postgraduate courses, together with another 586 places to diploma courses admitting non-graduate students.

These and other courses of this kind have not existed on anything like the required scale until quite recently, and a high proportion of the social workers now employed in the Local Authority Social Services and elsewhere had no formal professional training. The importance of the role of the social workers in society and the responsibilities that they are expected to carry is becoming better known to the public, and the need for them to have adequate training is at present attracting much attention.

The Council for Education and Training to Social Work estimates that an increase of at least 50 per cent in the number of places available for this purpose would be necessary to meet the recognized need in the next quinquennium.

There are clear indications that in the near future similar postgraduate professional courses in other areas will be required. One such area is that of social policy and public administration, which now forms an important element in a number of undergraduate

few exceptions they support themselves, and if they make a good deal of use of university buildings and other facilities, for the most part they do so in the evenings, at weekends, and at other times when there is spare capacity.

In 1973-74 about 30 per cent of postgraduate students in United Kingdom universities came from overseas. The universities are unanimous in welcoming them and regard their presence as beneficial. Among the principal arguments advanced in favour of the acceptance of a substantial proportion of students from abroad are the following: They contribute a significant broadening element to the experience of home students. Universities are interested in all the diverse societies and cultures of the world. To have representatives of all these societies and cultures among us is a significant contribution towards understanding them. It is important that there should be opportunities for British students, not also senior people, to study in universities in as many countries as possible. They are not likely to be welcome unless scholars of all nationalities are accepted in the United Kingdom.

The provision of postgraduate education for students from countries which have not yet made adequate provision of their own at this level is one of the most effective (and relatively inexpensive) forms of overseas aid.

We suggest that a system based on the following principles should be devised: As at present, there should be a uniform fee, different from that paid by United Kingdom students, for all overseas students. The size of the fee must be realistic, but in part at least, a matter of political decision, but it should not be so large as to make the total cost to foreign students of postgraduate education in this country not of proportion with that obtaining elsewhere, for example, in Western Europe or in the United States. (In the latter case, the fact that there are often better opportunities for earning money by part-time work during courses must be taken into account.) The experience of 1966 shows that the number of postgraduate students seeking admission to the United Kingdom universities can be sharply diminished at least temporarily by an increase in the fee.

It is highly desirable that the Government should continue to provide help in the form of postgraduate scholarships, or in some other ways to students from countries who would not otherwise be able to afford to come, but money provided in this way should be seen as part of our programme of overseas aid and not as part of the general cost of university education in the United Kingdom. Many such students come as a result of sponsorship by governments, but there should always be some provision for those who come on their own.

It must be recognized that any substantial increase in fees will be accompanied by a fall in the number of students coming to this country. The immediate financial consequence to universities of any increase of fees should be calculated taking this factor into account.

FUTURE POLICY

It is accepted that anyone offered a place for a degree course will not be prevented by lack of money from taking it up. To give this policy meaning there has to be a definition of what "adequate financial means" means. This is specified in the minimum income requirement to degree courses, generally including two A-level passes, but with limited concessions for "mature students" and people with qualifications of other kinds.

The ground on which the universities take their stand must be that this principle applies as much to the postgraduate level as to the other. Those who think, or appear to think, that it ceases to apply at the first degree level must be pressed to provide reasonable grounds for their belief.

The universities must continue to assert that this policy, of enabling everyone to go as far as he can, is the right policy. In all probability the complexity and sophistication of the tasks that have to be undertaken will continue to increase and the need for as many people as possible to be qualified above the level of a first degree will increase in proportion.

To suggest any extension of educational opportunities, however, may seem to be a very untimely move. We recognize that financial considerations may limit very severely what can be done in the next few years. Nevertheless the universities should have in mind the objective to which they hope to move as soon as they can.

As a necessary consequence we can do no more than sketch the outline of a possible policy for the future. We include it in our report in order to explore the extent to which such a policy would require general support from the universities. Whether or not our suggestions are on the right line, however, unless some general policy and direction can be formulated and agreed, there is in our opinion a grave danger that in years to come postgraduate education in the universities will be starved of the resources which it must have if the universities themselves, or any of their activities, are to flourish.

Edited text of the report, Sandy Group on



Confused thinking in the training of photographers.

Picture by Guy Hovart

Photography jobs

from Professor Margaret Barker

Sir—The article "Photography students 'almost unemployed'" (*THE TIMES*, July 11) suggests a considerable degree of confused thinking about education and training in photography and career opportunities.

The following statement is indicative: "It had been found that graduates of the course (reference to the Institute of Incorporated Photographers Professional Qualifying Examination)—from which an exception is granted to a number of recognized colleges offering degree or diploma courses in photography—were well-educated and often lacked the appropriate skills to move happily into vocations in photographers' studios".

Can anyone be too well educated? The reference to lack of "appropriate skills" gives a clue to the misunderstanding which still exists between the terms "education" and "training". A student who is undergoing a course in higher education, whatever the subject, is developing powers of analysis, synthesis and his critical faculties. If he is studying photography he is also developing abilities to visualize and construct images through the medium of photography. He should also acquire certain basic technical skills, but he will not have time to perfect repetitive practical skills at present in current use.

The question must be asked: unemployed for what? If employers are seeking darkroom assistants or skilled printers (both they should

be concerned with people who have been appropriately trained, not graduates.

Most degree and diploma courses in photography include the study of associated subjects in the curriculum, so that graduates will not be limited to the practice of photography or film production as a career. Study of other forms of media and communication theory and practice are frequently associated. There are close associations between design practice and photography, as indicated in Gordon McLeish's letter (*THE TIMES*, July 18).

Students need not despair, the prospect for graduates of well-balanced degree and diploma courses in photography is not as bleak as some people seem to think.

The question must be asked: unemployed for what? If employers are seeking darkroom assistants or skilled printers (both they should

meeting a number of staff at a local careers conference. (The total number of sources quoted is 218, while only 208 students were admitted—the discrepancy is caused by more than one in the United Kingdom, and to all major offices at the careers service; 91 students quoted college literature or teachers or careers officers as their source of information.)

The remaining students heard about the college from friends (20), through the CNAA compendium (20), or from a magazine article

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The crisis in black studies

from Angela Stent

CAMBRIDGE, Mass. Seven years ago, the assassination of the Rev Martin Luther King galvanized black students to demand that universities introduce black studies. In the general climate of campus activism, interdisciplinary black studies programmes mushroomed—but the black studies experiment has turned sour.

Today, many programmes are closing down, and black staff and students are becoming deeply divided. Black applicants to colleges have begun to level off, and the controversy over Afro-American studies has become part of the more fundamental issue of the place of blacks in universities.

In the late 1960s, many college officials saw the introduction of black studies programmes as a solution to past racial wrongs, as an instrument of cultural identity for black students, and as a way to legitimize the study of the black experience in areas such as history, sociology and the arts.

By 1972, nearly half of the 2,578 colleges in the country were offering at least one black studies course, and 500 colleges had full-time black studies programmes. That number has now dwindled to 200, and registrars across the country report that only 10 per cent of their students take more than two courses in the subject.

Yale history professor John Blussé, former acting-chairman of the department of Afro-American Studies at Yale, predicts that by the late 1970s most of the black studies programmes will be gone. And a recent Berkeley report on the black studies department criticized the programme for having the reputation of "not being truly professional, or at least not academically oriented."

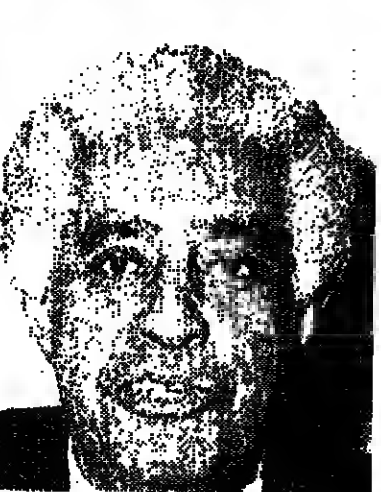
The story of Harvard's black studies programme is in many ways typical. In 1963, the Harvard-Radcliffe Association of African and Afro-American Students was founded, but it never received official recognition because of what was seen as its separatist membership policy. In 1967, responding to increasingly violent demands for Afro-American studies and gave undergraduates full voting powers on its academic board.

However, many distinguished black scholars refused to teach in the department, and those that did teach there found that control passed to the militant undergraduates.

After a series of crises, an investigation committee recommended that



Martin Kilson—black studies are academically inferior.



Ewart Gullner—"The need for liberation."

undergraduates should have their voting rights. A search for new staff was launched and curricula were altered. The most vocal critic of black studies at Harvard is Professor Martin Kilson, the only tenured black professor in the Government Department. A member of the faculty since 1962, he teaches African politics and patterns of urban American politics. He criticises black studies because he says they are academically inferior and reinforce an unhealthy separatism.

He says that Afro-American studies are blatantly anti-intellectual and that most departments have no intellectual integrity. "The militant separatists among Negro students and faculty on white campuses have convinced themselves of the impossibility that the inferior academic standards and norms they helped impose upon white colleges hold the key to black unity and rejuvenation. No ethnic group in American

society has ever advanced its standard of living and status without accepting achievement-orientation as a desirable life-style," he says.

Professor Kilson's main opponent at Harvard is Professor Ewart Gullner. A sociologist who came to Harvard in 1969, he is chairman of the Afro-American Studies Department and its only tenured professor.

He says: "Afro-American studies are our best—perhaps our only—academic vehicle for introducing those values with which our great leaders have been deeply concerned—the need for the liberation of African peoples throughout the world, the need to create a more humane structure of human relationships for all."

He denies that his department is academically inferior: "Our major difficulty has been that the university has not supported our department as it initially stated it would."

With about 20 of its 600 black students currently majoring in black studies, Harvard is attempting to recruit staff. But because of the department's controversial reputation, this has been difficult.

Generally black studies programmes have declined in popularity because of diminishing student interest, insufficient funding, staff scepticism and increasing student preference for marketable skills. However, some academics suggest that they may have already fulfilled their function and that if they are to survive, they must change.

The evolution of the Ford Foundation's support for black studies programmes may be a pointer to their future. The foundation has changed from short-term support for different undergraduate programmes to more solid financing of development at graduate level. The new emphasis is on developing materials to be used in black studies programmes by producing highly qualified scholars.

While the debate about the value of the courses continues, colleges are finding it difficult to recruit black undergraduates. Harvard, for example, recorded a 25 per cent drop in applicants this year.

Between 1964 and 1970, the number of black students on mostly white campuses increased by 173 per cent. However, although blacks constitute 12.1 per cent of the college-age population, they still make up only about 8 per cent of the college enrolment.

There is some controversy over the causes for the fall-off in black applicants, but officials say doubts over the quality of the programme are one of the main factors. There is also a feeling that the pool of "qualified" applicants is drying up.

Mozambique

1,500 students go out into the community

from Andrew Lycett

LOURENÇO MARQUES Some 1,500 students at the University of Lourenço Marques and its associated faculties started a voluntary four week work-with-the-people programme this month.

Under a white Fretilim-appointed rector, Dr Fernando Ganhau, Lourenço Marques University has been restructuring itself for its new role in the Marxist society of newly independent Mozambique.

Dr Ganhau, who worked in the Mozambique Institute in Dar-es-Salaam, and in Warsaw, believes strongly in discussion as a method of teaching and as a prerequisite to action. Already some lectures have been stopped, and seminars introduced.

Students have been encouraged to take a lead in the decision-making. They have initiated health and literacy campaigns to the countryside. Even history undergraduates have toured the rural areas investigating sources, looking at problems of local history, and trying to convey their interest to the people.

The current month-long campaign of working with the people is an extension of this. It is designed to ally the criticism that the university is too academic.

Recently, for example, the num-

ber of law students was double that taking agriculture and allied subjects. In fact, this was accounted for by the disproportionate number of middle-level jobs working hard to obtain professional qualifications before independence. The agricultural faculty has already been moved away from the capital.

One of the main problems is to find qualified people to teach them. A large number of lecturers have left Mozambique for Portugal, not simply because of fear of independence, but also because there are three new universities in Portugal ready to be staffed. With them have gone some 800 students.

Until now it has been almost impossible for foreign academics to work in Mozambique, but Fretilim are said to be keen to introduce qualified people from abroad to help reconstruction. In education, they will be especially hampered by the shortage of books and modern materials. Syllabuses have to be rewritten. The economic theory taught in the university is now considered old-fashioned.

But it is obvious that Fretilim will not want to antagonize the students, who will be needed to reconstruct the country. Hence the curricula and the voluntary work with the people. But the guidelines set for a basic change in educational policy, and students will now be encouraged to work for the people rather than themselves.

Peru

Pressured universities still escape reforms

from Porrick Knight

LIMA The far-reaching programmes of educational reforms being undertaken by the left-wing nationalist government of Peru have still not been extended to the universities. General Velasco and his ministers regard them with a certain suspicion and they have been given low priority. The main goal is perceived to be to produce the large numbers of middle-level technicians and skilled workers needed to establish and build up the heavy industrial base now being formed.

The universities of Peru are under pressure from several directions. The high salaries paid by the growing public administration and the growing public administration are a source of discontent. The universities are also being pressured by the need to provide courses in technology, costs which the majority of students are unable to pay.

Efforts are being made within the Higher Education Council, the universities coordination body, to produce manpower demand projections in consultation with the Planning Institute and the various ministries. The high salaries paid by the growing public administration are a source of discontent. The universities are also being pressured by the need to provide courses in technology, costs which the majority of students are unable to pay.

Certain ministries and public bodies now choose their candidates almost exclusively from particular universities. Others, such as the Federico Villarreal University, a centre of the APRA party, is opposed to the government's policy as a constraint on government intervention, and graduates from there are having increasing difficulty in getting jobs. Graduates of other state universities whose courses are interrupted by regular strikes are also discriminated against in selection.

On the other hand, although discrimination on other than academic grounds undoubtedly still exists, the position has greatly improved. In the past, no qualifications at all were generally required from holders of high technical office, other than affiliation to the right party—the party in power. The situation now is that applicants for high office have to be qualified, and generally need the support of someone in power.

Drop-out and failure rates reach 80 per cent, and a fairly rigorous entrance procedure. Some 90 per cent of candidates get a place somewhere. At some high prestige facilities there may be hundreds of applicants for each place, and a large proportion of students and up studying courses far removed from the disciplines of their first choice. The phenomenon of the empty school is growing as a result of the increasing competition for worthwhile places. Total student numbers were 160,500 in 1974, more than 97,000 in Lima's 15 universities. Ten years ago there was a national total of 40,000 students.

Despite growth in student numbers opportunities in Peru have still not caught up with the supply of trained people, other than in areas of science and technology, where entrance is severely restricted because of a lack of adequately equipped laboratories and work shops. The private universities, which have mushroomed in recent years, seldom extend from the humanities and arts because of the cost of providing courses in technology, costs which the majority of students are unable to pay.

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France

Reports say French students should have more help from UK

from George Morgan

NICE Two reports published recently by the British Council and the French government's Office National des Universités seem likely to pave the way for a major rethink in the field of student interchange between the United Kingdom and France. The reports, called for by a joint meeting of British vice-chancellors and French university presidents in November, 1973, outline current practice in student exchanges between the two countries and investigate the academic and financial obstacles to further development of existing schemes.

The Office National report is highly critical of what it calls "the disparity between the number of French students in Britain and the number of British students in France". The paper also advocates a number of changes in existing British regulations covering incoming French exchange students.

On the face of it, the French case appears fairly watertight. During 1973-74, 1,600 British students were enrolled at universities in France. Of these, 129 followed arts courses, while 1,238 followed law, 85 in science and 50 in medicine. The figures quoted by the report do not include British students admitted to the grandes écoles or following language and civilisation courses designed specially for foreigners.

In contrast, only 250 French students were engaged in full-time study in British higher education. Of these, 47 followed undergraduate courses in universities and a further 68 were involved in post-graduate work. In the polytechnics there was a total of 132 French students of which 27 were signed up for advanced courses. Even taking into consideration the 492 students listed by the British Council report as enrolled in other "private" institutions, the total of 742 falls well short of the number of UK students in France.

The discrepancy, as both reports point out, is largely due to contrasting methods of university admission and student financing. In France, access to university has been relatively easy both for French nationals and for overseas students. Up till this year, as part of a student meeting the minimum requirements for admission to a British institution of higher education was automatically allowed to enrol for a French degree course. This occasionally meant that a candidate turned down to Britain was accepted in France.

Recently, however, a new system of pre-enrolment has been introduced. From autumn this year, foreign candidates wishing to register at a university or Institut Universitaire de Technologie in France will be required to apply before May 1 preceding the start of the period of study. Applications must be sent to individual universities, including at least one outside the Greater Paris region. Applicants will be informed of the university's decision before June 30.

The advantage of the new system, claims the French report, is that it enables French universities to implement a "systematic policy of reciprocity" by urging British institutions of higher education to offer French students the same facilities and facilities to those available to UK students in France.

Financially speaking too, says the French report, the British student in France enjoys the best of both worlds. As the majority of these students are completing a compulsory year abroad as part of a degree course, the university in the UK, they receive the benefit of their L.A. grant, often at maximum rate and with additional allowances to cover

French system of indirect subsidies to students. This means that tuition fees are low, the maximum rate amounting in only £20 including social security cover.

Accommodation in State-subsidised cities universities is available in many British students and costs only £13 per month, a third of the cost for comparable lodgings outside university residences. University restaurant find is cheap too, 44p for a four-course meal, half the expense being borne by the State. The cost to the French government of British students in France is given by the Office National report as 5,000 francs per capita or an annual sum of £750,000.

According to a British Council officer in Paris, the differential between the amounts spent by the two governments on exchange students is offset to a large extent by the much greater number of jobs of assistance which are made available to French students every year in British schools. Over 3,000 assistants come to Britain each year from France as compared with the 1,500 United Kingdom students who go to France in a similar capacity.

The Office National, however, contests the validity of this claim. Although fewer British undergraduates come to France, their annual salary is much higher, £1,600 per year at present, compared with the £1,000 per year earned by French assistants in Britain. Also, French universities take on approximately twice as many lecturers or are employed in higher education establishments in Britain.

In comparison with the British student, in France, the French student hoping to spend a year in a British university faces what appear to be almost insurmountable financial and administrative hurdles. As the British Council report points out, overseas candidates for higher education are assessed to exceed the same way as UK students. Applications must be made a year in advance and are channelled through the UCCA. Applicants cannot be guaranteed a place and successful candidates have little choice as to the geographical situation of the university or polytechnic to which they will be sent.

British higher education establishments are also reluctant to accept students for less than a full three or four-year course. The combined effect of these regulations is to deter many would-be French applicants, the bulk of whom are assistants and lecturers on short-term visas from their home universities in France.

The situation is further complicated, the Office National report suggests, by the conservatism of French academics. Universities in France are reluctant to recognize periods of study completed abroad in the assessment of a student's results. Consequently, a period of study in the student degree course.

According to the Office National, however, a "revolutionary step" has just been made. The recent decree governing the new two-year masters courses in applied modern languages, economics and mathematics allows for up to six months to be spent abroad as an integral part of the course. Examinations taken at a foreign establishment during this period can now be validated by the French university.

British universities and polytechnics already operate a similar system for their students in France although strict checks are kept on the level of academic achievement. This is done by requiring final examinations on the students' return to Britain or by dispatching British lecturers abroad to follow students' progress.

Among the proposals contained in the French report is a suggestion for the setting up of a joint Anglo-French commission to investigate the problem of the recognition of periods of study abroad.

polytechnics in Britain waived the fee very readily in the case of exchange students. However, the apparently high cost of tuition, it was said, acts as a deterrent to many prospective students from France who are aware only of the formal regulations.

Living costs in Britain appear high to the incoming French student accustomed to subsidised prices. In addition, only a handful of scholarships and bursaries are available for incoming French students, mainly at post-graduate level.

Nor can an overseas student qualify for a L.A. grant unless he has resided continuously in Britain for three years before starting a course.

As a result, interchange students must pay the full economic rate for food, accommodation and travel out of their own pockets. The United Kingdom social security system, which is available to British students every year in British schools, is the only feature of British higher education arrangements that presents a distinct advantage in the visiting French student.

Some British higher education establishments have recognized one disparity between the two systems and have made their own bilateral exchange agreements with universities in France in an attempt to right the balance. Frequently, British universities and polytechnics have agreed to accept French students out of their own funds.

In the case of one-on-one exchanges for less than a full academic year, the fee paid by the outgoing British student has been retained to cover the cost of the visiting French student. At some universities, such as Aston, Swansea and Southampton, accommodation is provided free. Others like Reading and Aberdeen stretch generosity so far as to offer incoming students allowances equal in excess of maximum L.A. grants.

Another formula for reducing the financial differential outlined by the British Council report involves courses run jointly by departments of business studies at home and abroad. Exchange students are allowed to study in their own country at no fee, but to study in the home institution. The London Business School runs a three-sided scheme along these lines with the HEC-Paris and the Graduate School of Business Studies in New York. The BS also provides free accommodation for incoming students.

The French report contains a number of proposals of its own aimed to rectify the imbalance. One remedy advanced would be to make the British student's maintenance grant available to the visiting French student. The DES, it is suggested, could then provide some alternative source of revenue for the British student travelling to France.

Falling this, British students could be allowed to keep their L.A. grants but the French government would require them to pay the full cost of tuition, food and lodging. The funds obtained in this way could then be used to subsidize French students in Britain.

While complaining of the financial and administrative divergences between the two countries, the French report recognizes the "excellence" of the British tutorial system and the personal attention given to students. If a larger number of students were able to benefit from these arrangements, the report adds, many of the existing difficulties could be overcome.

The report goes on to suggest that British universities should create a category to cater for French students wishing to spend a year or less in the United Kingdom. While following courses and seminars along with their British counterparts, these students need not be given the same specialised assistance reserved for undergraduates following a complete course of study. At the same time, the report proposes that French universities should provide a more personalized form of tuition and guidance to exchange students from Britain.

Since the reports were published a number of private meetings between British and French officials have taken place. The atmosphere is said to have been open and friendly, and a French representative declared that a number of mutually acceptable solutions have

Sweden

New programme will send key workers to college

from Mike Duckenfield

STOCKHOLM Workers with at least four years' experience in one of six key Swedish industries are to be eligible for monthly state subsidies of between the equivalent of £150 and £220. The subsidies will allow them to sharpen their technical and administrative skills at eight experimental colleges.

The scheme was launched this month and initially catered for 330 workers. It is one of the lesser-known measures in the major UG reform package of higher education and post-school reforms agreed by the Riksdag at the end of May.

Whilst the more controversial innovations are not to be implemented for another two years, there was considerable all-party support for the new colleges. The Government were confident enough to advise courses and to start recruiting students two months before the reforms finally became law.

In the first year there will be eight vocational-technical colleges. Five of them will offer single-industry courses and three will cover two industries. All have been carefully located.

There are to be no new buildings. Some of the colleges will have to be housed in local upper-secondary

schools with workers attending alongside 16 to 20-year-olds. Others will be located in university-level institutions including the technological university at Lulea in Swedish Lapland.

All courses except one will be full-time and will last for three 18-week terms. Students will have 40 hours of tuition a week.

About a quarter of the tuition will be in general topics such as Swedish, maths, economics and production. Some courses will also include physics and chemistry, and English will be an optional extra.

The rest of the courses will be split so that for every four hours of specialist tuition there will be one hour reserved for work visits and other similar projects.

Already 575 people have applied for courses this autumn, and 330 have been chosen. They will automatically receive paid educational leave and compensation for lost earnings. This will be topped up by additional state loans (up to the equivalent of £73 a month) made available.

The education is seen as a continuation at a higher level of that available on two-year vocational lines in the upper secondary schools. Industries covered in addition to clothing and pulp and paper are steel, food, engineering and wood.

South Africa

The safest of three candidates is chosen as new chancellor

from Andrew Lycett

JOHANNESBURG At the University of the Witwatersrand, the English-speaking university in Johannesburg, 6,000 members of Convocation have voted Dr B. L. Bernstein, former president of the Chamber of Mines of South Africa and former chairman of the Anglo-Transvaal Investment Company, as South African universities towards the current changing political climate. Although the English-speaking ones have expressed liberal opinions and have stood out against the 1959 Act (which restricts the influx of students to the students of the Afrikaners), both staff and students seem to have been cowed.

An interim report of the Vries Commission of Inquiry into South African Universities published at the end of last year suggested that universities might be lined if their students misbehaved. During the same week the Afrikaner Student body, the association of students in the Afrikaner universities, held a five-day conference on "Changes in South Africa". Delegates agreed that they thought it was time for closer contact between Afrikaners and black universities, but editors in the two main English-speaking Johannesburg newspapers commented unfavourably on their lack of commitment.

But opinion among some members of the university is that Convocation has opted for the safe candidate rather than a potentially controversial figure. This reflects the attitudes of the

Nigeria

University expansion despite graduate unemployment

by Ronald Watts

The Nigerian Government is planning to establish four new universities in the next five years. The Third Development Plan, launched recently, provides for an increase of the number of universities to 10. There is also some pressure to have a university in every state, which would bring the total to 13.

Those who press for these universities have ignored the facts that in the southern states, graduates are finding jobs increasingly hard to obtain, and that in the northern states, there is already great difficulty in filling the ranks of senior personnel, of building materials and equipment, and reliable and experienced contractors.

One healthy aspect of the job shortage is that some graduates may not be forced to start their own businesses.

France to keep licence

The licence is to remain an integral part of the French higher education diploma structure. After long consideration introducing a two-year licence, then announcing the abandonment of the licence, the four-year licence, M. Jean-Pierre

Boost in campus holidays for the family

from Frances Hill

NEW YORK Cornell University's "education vacation" for the whole family, offering courses for adults and a variety of learning experiences for children, is proving more popular than ever this summer, nine years since it first started. Some programmes were fully booked by April, and enrolment is up by 50 per cent.

Cornell is one of five American universities offering parents the opportunity to turn one or two weeks of their annual holiday into a short adult education course for themselves, and a summer camp for their children.

Started as a service for over-21s, partly to relieve extra old-age donations—the programmes are now open to all. No educational qualifications are needed.

Courses include two cross-disciplinary sessions of a week each, and a variety of workshops on topics such as horticulture and photography. There is pre-school education for children aged three to five, and programmes for children aged 6 to 12, and 13 to 16.

Here end up There" and "Revolution, Tradition and Cultural Exchange". The first is run by an astronomer, a biologist, an historian and a professor of literature, and examines the development of science, the way men in different periods have viewed space, the cellular structure of living organisms, and the scientific possibility of life elsewhere in the universe.

The second is taken by an historian, a professor of literature, a psychologist and a structural engineer, and studies various revolutions.

Each of the inter-disciplinary courses costs \$170 per student for tuition, room and board. The workshops cost \$180, the courses for older children \$100 and for three to five-year-olds \$75.

As well as being relatively less well paid than the past, universities have lost the position of prestige which they so long held in society. Ambitious young men no longer seek the cadet of a university teaching post to better diam in their profession; a job in public administration now has much more prestige. Consequently, the number of full-time staff has gradually fallen, with the part-time staff who replace them lacking in commitment to the institution.

Teaching loads are heavy, up to 15 hours a week, with a 10-hour minimum for a lecturer, whose salary is around £150 a month, while advanced to higher posts remains very

In literature, architecture and society. It also looks at what makes a "revolutionary personality". Adult students, although not required to do homework during the courses, are expected to read four texts each to them before the courses begin. There are no papers or examinations, and students do not gain credits.

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LETTERS TO THE EDITOR

Arts versus science finance

From Dr H. Shukman

Sir,—You report the conclusion of Professor Alan Merrett (*THES*, July 25) that society's investment in higher education is an economically poor one. Professor Merrett identifies economic return as income taxes paid by our students in later life. It seems, therefore, fitting to ask ourselves what sort of students are most likely to be paying high taxes, if the balance of resources within our universities is to reflect social cost-benefit.

As a first step we can put in the bottom of the scale all those reading science subjects, for it is surely not research chemists and engineers in industry, nuclear physicists or even most medical doctors who pay really significant income tax. The categories most readily identified as high taxpayers are, among others, merchant bankers, top advertising agents, successful barristers, film

and pop stars, bookmakers and professional gamblers, industrialists and entrepreneurs.

Of these groups, those which have most likely been at a university have probably read law, politics, philosophy, economics, history, English, or modern languages, and it is unlikely that they will have pursued science degrees.

Thus it is the arts faculties which are the seedbed of high income-tax payers and hence the source of society's best return for its money. Does this not suggest that university administrators should rethink the priorities by which the science departments regularly receive the lion's share of our dwindling resources, while the more high-gear arts faculties have to make do with a pittance?

Yours faithfully,
H. SHUKMAN,
St Antony's College,
Oxford.

Comparing unit costs

From Professor M. J. V. Pitteway
Sir,—I was at first surprised in fluid Brunei University among the more expensive in your list (*THES*, July 25). Of course, being small might account for part of our seeming extravagance, our student/vice-chancellor ratio, for example, being more favourable than most.

My attempts to reproduce the figure you quoted, however, were thwarted until I noticed that you were quoting the average grant for each "full time student". As it happens, Brunel University serves a large number of postgraduate students who attend our advanced courses on a part time basis. In our case the number of "full time students" is very much less than the number of "full time equivalent students".

Could it be that your listing simply shows which universities have a large proportion of part time students, rather than the difference in unit costs you suggest by your headline "State gets best value from Bath and Durham"?

I was even more surprised to note that the comparatively cheap sounding figure you quote for the polytechnics of Scotland was computed on the "average net recurrent expenditure per full time equivalent student". Obviously, if it is a case of a comparison look favourable to the polytechnic sector, there must be something to hide?

Yours faithfully,
M. J. V. PITTEWAY,
Head of Department of Computer Science,
Brunel University.

The Department of Education and Science confirmed this week that the figures for Scotland were not comparable with those for England and Wales, since the Scottish statistics, unlike the others, include part-time students.—Ed.

London's draft Bill

From Mr J. Stewart Cook
Sir,—Your leading article (*THES*, July 25) with much of which I agree, is in one respect misleading in that it suggests that the draft Bill relating to the constitution of London University has the object of freeing the university from a requirement to circulate a copy of any now submitted to the court, convocation and the governing bodies of the school.

It is not the intention of anyone on the scene, as I understand it, to say and dispense with the obligation to consult with the court and convocation in making proposals, and there has never been any such obligation, nor does one exist in the University of London Act, 1926, in relation to the governing bodies of the schools.

The purpose of the draft Bill is certainly to free the university from a restriction of its statutory powers but the freedom sought is from the provision in the Act (section 4(1)) that any statutes made by the governing bodies of the university must be in general accordance with the report of the committee (the Hillon Committee) appointed in 1924.

That any university should be backed in its legislative function by the report of a committee published by the government is surely an absurdity which should be swept away as soon as possible.

At the same time, however, it is

open to considerable doubt whether the senate should possess a wholly unlimited power of changing the basic of the university. One solution might well be to have "reserved" statutes which could only be changed with the agreement of the schools, the court and convocation.

For the university to behave as if its decisions need bear no relation to the views of the government which provides it with the overwhelming bulk of its finance, is a deception which will damage its academic performance far more than would a policy based on a realistic assessment of the position of universities in relation to the community which sustains them.

Yours faithfully,
J. STEWART COOK,
Member of senate and of Murray Consultative Committee,
University of London.

Manpower planning
From Mr A. Tattersall
Sir,—The DES, the person of Lord Crowtherson, has been emphasizing the need for the universities to have regard to national manpower needs in planning their future intakes of students to their various faculties.

Your issue (*THES* July 4) records that "There is a consternation among teachers' organizations at the prospect that sudden changes in the teacher training will throw 2,000 college of education lecturers out of jobs, and that a sizeable proportion of this year's college output will not get jobs."

Open University staff face pay cuts, and the OU will have to turn away over half of its new candidates, though it is attracting the children of the workers and others who cannot get higher education by other means.

The county of Worcester and Hereford is indignant at the way the DES is threatening closure of two out of three colleges of education.

Yet very few heads with whom I have spoken lately are happy at their staffing position.

We know that the country is in dire financial difficulties, and that the DES's own performance in the matter of teachers' training does not enhance its credibility when it starts telling the universities what they ought to be doing.

Scholarship

From Mr E. W. Cooney

Sir,—Since academics themselves so often talk about their work largely in terms of teaching and research, as if there were little more to it than those activities, I suppose Mr Hewton (*THES*, July 25) is not to be blamed for discussing improvements in teaching in the same context.

Yet to do so omits a vital factor, scholarship, which is neither the one nor the other though partly dependent in practice on both. Scholarship provides the distinctive, unifying principle of universities as institutions. The mastery of a field of knowledge is a scholar's endeavour and it is an enterprise which is open, in principle, to anyone who is willing and able to recognize the disciplines involved and to accept them.

There are evidently many means whereby scholarship may be encouraged, their common interest and the improvement of such means, about which Mr Hewton makes some interesting suggestions, is certainly important.

But first things first. Maintenance and enhancement of scholarship are the sine qua non of a university's work from the undergraduate in his first year to the emeritus professor. Teaching and research, whether taken together or seen in opposition, do not subsume this scholarly activity, as contemplation of a university library, for instance, quickly suggests.

A body of knowledge is there to be grasped. Of course few scholars work in their salt will be entirely different to opportunities for specific research projects. Most, we will, I believe, acknowledge that teaching is also a stimulus to one's learning. But the cultivation of one's appropriate knowledge is neither of these in itself and does not absolutely depend upon them.

The last ways to provide for the cultivation of scholarship and therefore the fundamental question when one is concerned with the particular question of the improvement of teaching. I suggest that the first requirement for some students coming fresh to university is to be helped in a scholastic spirit to understand for themselves what any scholar needs to know, and the demands of one's discipline.

The difficulties of some undergraduates seem to me to arise at this point, particularly in their first year or so, and reflect, perhaps, changes in the assumptions underlying the education of the young. If so, the remedy is not necessarily to call into question present teaching practices as a whole but to make more emphasis on early understanding of what is involved in a discipline: first submission to its discipline, then mastery to the extent of one's abilities.

Yours faithfully,
E. W. COONEY,
Reader in economics and social history,
University of York.

School science

From Mr Michael Thain
Sir,—I was delighted to find Professor Margaret Gowill's (*THES* June 6 and July 11) advocacy of undergraduate science should be encouraged to meet the history of the subject.

My belief is that the blame for ignorance of historical perspective by these students is to be laid squarely on the door of school science—and A-level boards in particular.

The current emphasis in A-level science syllabuses upon rapidly expanding fields (e.g. biology and space science) is biology is strangling any perspective which pupils may be gasping to achieve.

How, I ask, can recent discoveries be interpreted except in the light of the past? And how much more past do boards think we can afford to school under the present ludicrously top-heavy and all-too-temporary philosophy that what is past is dead? For such is implied.

Yours sincerely,
MICHAEL THAIN,
Biology Department.

Most psychiatrists suffer from a trained incapacity to understand social organization and philosophical discourse. Too many so-called scientists of the mind have a fixed antipathy to the mind's rational operation and a rational resistance to a reasoned comprehension of the social context of mental activity. I add a further disability: an ignorance of and a distaste for the disciplines of historical understanding. Put it another way: most psychiatrists do not understand time, logic or social space.

Thomas Szasz is an exception, and he confirms the rule by arguing that psychiatry suffers from the deformations just mentioned. He also confirms the rule by himself paying attention to history, logic and society. He writes in a manner quite inimical to the normal psychiatric style. There is no trace of the vatic silliness of much psychiatric imputation, but a direct attachment to logical form, the citations of ascertainable empirical references, the sentence, the rhythm and energy of rational and liberal man.

Szasz exemplifies the usual stylistic difference between those who espouse a soggy and lethargic libertarianism and those who actively rare for the promotion of liberty. Of course, his history may be overimperial, his empirical generalizations incautious, his logical playfulness too exuberant. My point is that he offers his opponents one basic courtesy: the opportunity to show he is wrong. It is this which finally separates him from most of his psychiatric brethren.

Thomas Szasz is not a systematic thinker but someone with a lively and combative intelligence who frames certain hypotheses about man in time and in social context. Hypotheses and historical generalizations on the scale required are necessarily crude, particularly when they are concerned with the complex interplay of social constants and historical particulars.

Szasz is trying to isolate certain key recurrent social processes and then to show how they undergo semantic and categorical transformations which alter their colour, while leaving a great deal of their social substance. He is pushed into such considerations by a much more limited aim, which is the exploration of the specific paradox of the supposedly humane treatment of the mentally ill in American society. What problem is it that underlies our treatment of the mentally ill?

The issue is simple. The concept of mental illness began its career with a humane intention which has now doubled back on itself. The underlying notion was that not everyone was fully responsible and therefore could not be held to account. This was extended to a position which said that when all the factors had been taken into consideration, you could not expect a man to do otherwise than he did.

Now in order to be just everything needs to be taken into account, but once this is done the presuppositions of the wider justice undermine the very concept of justice itself. If no man can do otherwise than the concept of unjust judge disappears with the concept of blamelessly criminal.

Moreover, when illness is imputed to the criminal (or to the deviant) society is able to treat him as less than human. He can then be "reformed"—literally in respect of his violent character, rather than punished in respect of his specific act. He is susceptible to remoulding, and this is inevitably done in terms of the society's ordinary and somewhat arbitrary moral requirements, supplemented by the dominant notions of the psychiatric sub-culture, and it may be added—of its sub-contracted agents to social work.

The consequences are twofold. First, as the prison is converted into a mental hospital so the mental hospital is converted into a prison, and moreover a prison without the limitations and rights attaching to the ordinary usages of law. Secondly, as the language of demarcation is converted into the language of disease, so the language of medicine is converted back into a vocabulary of demarcation. The opponents of this vocabulary use it to bind and loose whom they will. They excuse and they daunt.

Examples lie on the table in front of me perfectly illustrating the Szasz case. On page three of *The Times* for May 26, Mr John Stonehouse offers us the psychiatric excuse for his new act of a return to "my old personality, a different one, the old pattern, ally has been enriched by the objectivity in the second parallel personality."

Another example involves a psychiatric "analysis" of the personality of the American fundamentalist. I have my own opinion of fundamentalism, but the supposed psychiatric analysis of it is no more or less than philosophical social and personal disapproval clothed in the

Ceremonial Chemistry. *The Ritual Persuasion of Drug Addicts and Pushers*, by Thomas Szasz. Routledge, £4.95. ISBN 0 7100 8122 7.

Law, Liberty and Psychiatry. *An Inquiry into the Social Uses of Mental Health Practices*, by Thomas Szasz. Routledge, £4.95. ISBN 0 7100 7922 2.

The Age of Madness. *The History of Involuntary Hospitalization presented in selected texts*, Thomas Szasz (ed.). Routledge, £5.95. ISBN 0 7100 7993 1.

'Doctors' of the mind or leeches of the soul?

David Martin discusses the ideas of Thomas Szasz and his critique of the social definitions used to legitimate the treatment of mental illness



The use of torture during the Spanish Inquisition to extract confessions of heresy. "The age of faith had its inquisitors; the age of science has its quasi-medical definitions of the allowed frontiers of normality."

language of psychopathology. It is denunciations disguised as description. This is characteristic of the double-standard within the psychiatric system (or rather, the psychiatric systems).

Szasz offers his own examples. The drug addict is excused, the drug pusher is denounced, whereas on the general principle of medical care, certain social constants underlie the great change, before I go on to give examples of these constants.

The myth of choice, including the great enlightenment myth of secularization, partly exists to mask the fact that so much remains the same. The categorical and semantic shift is so obvious in order to obscure what ought to be equally obvious: the fundamental continuities. The very fact that we are forced to trace the historical contour through the eye of the enlightenment myth is just one illustration of the extent to which things remain the same.

Man still lives by myth; and the myth of demystification is one of the major agents of obscuration. Every great myth encapsulates the past within the categories of its own promise and this is as true of Marxism and Freudianism as it is of Christianity. This encapsulation destroys our capacity to look at the historical record and to recognize the permanent recalcitrance against which no new myth attempts to move.

Myth is the precondition of change and activity, but it also destroys the possibility of its own fruition. Each great system is a prisoner of its own promise, and so becomes a potent agent of re-mythification. At the same time it does contain along its margins "unravelling elements."

This is a new seriousness of faith which underlaid the Age of Faith, and it is reason which now exposes the social reality of the Age of Reason. Which is not, I say, of course, that the countervailing elements are themselves devoid of delusion.

Which then are some of the re-entrant social constants against which both faith and reason initially range themselves and which they eventually collide? I focus on the scapegoating mechanism because it relates very closely to Szasz's most recent book on our attitude to prescribed and proscribed drugs.

Science (Technology, Progress), to be virtuous means to be healthy (happy), and to be evil means to be mentally sick (unhappy).

This is a statement of a particular concept of secularization, and I would like to state in my own terms Szasz's underlying intention: that certain social constants underlie the great change, before I go on to give examples of these constants.

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in completeness involved in the definition of manicure and of what Szasz calls "psychopathology." Society must exist by revivifying ormin inclusive positives and negatives. (For a parallel exposition from the perspective of literary criticism I would cite Kenneth Burke, not to mention a debt to Mary Douglas.)

The Greek for scapegoat was "pharmakos" and the ritual act of scapegoating was a crucial "therapeutic" intervention designed to protect individuals and communities and maintain badly and corporate integrity. However the ancient practice of scapegoating differs little from the modern practice, except in degree of realism: the ancient society which engaged in scapegoating knew what it was up to.

It is the special characteristic of modern man in dress up the scapegoating mechanism as knowledge. What relates to "pharmakos" is pulled in under the scientific umbrella of pharmacology. Through we celebrate the modern differentiation of spheres, church from state, medicine from religion, yet in the most modern of societies, the state, religion and medicine collaborate practically, and also through their social definitions, in the task of social regulation.

Low, the vehicle of social control, may appear almost wholly secular, but it is in fact importantly religious and political. Especially is this the case with respect to what has always been important for the body politic and the body of the state: the substance we do and the one thing in the body. Life, and that means social life, has always been thought of as achieved by a negative and a positive, the thrusting out of evil and the taking in of the good.

Food and drink are the symbolic objects to which this positive and this negative are transferred. For instance our present perception of drug users and pushers belongs to this necessary function of purification. However, the negative is of course also a positive: the ceremonial expulsion of the negative from the garden of sanity is matched by the positive ceremonial expulsion of established society from the counter-cultures.

Once upon a time men called things "holy" which was his covert, proscribed way of trying to be clean. Nowadays, we insist on cleanliness, but we resist the extent to which we attempt to be "whole" and "healthy" is continuous with the ancient desire to be holy.

We all need, as man has always done, a panacea: aspirin or prayer. Both ways on, they—and we—are taken in. If you eat it that you die, said the God of Religion; similarly as science, in relation to drugs. We shall only become ascetic, i.e. make our myth true, when we demystologize our attitude to what we take in and what we expect.

Here we move in Szasz On Liberty and this transition is best marked by some comment on the gloss he gives to "all who take the sword shall perish by the sword." He translates this as illustrated by the way physicians, who act as agents of control, are then caught up themselves in the web of social control. The God of Immoderate Health, for whom nihilism is synonymous with improvement, himself requires the sacrifice of the physician's own autonomy.

There are certain other crucial processes which I have not space to set out. For example, there are the accelerating cycles of threat and control, which in the end engulf the specific agents of control—in Szasz's example the doctors themselves. Then there is the difficulty of maintaining a *via media*, whereby the vocabularies of science and faith, holiness and health, do not push beyond their proper limits and spheres in a manner destructive even of themselves.

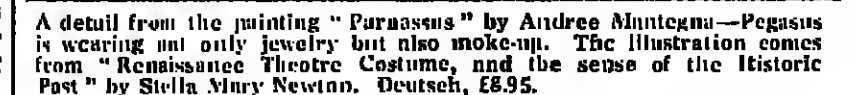
The same argument cannot exist without some symbols between dominant vocabulary and repressed vocabulary. This is a point best illustrated by the recent debate over exorcism in which one set of believers and non-believers maintained that the vocabulary of demystification had been supplanted by psychiatry while another set maintained the two vocabularies were parallel to each other. A careful critique of his contentions is impossible, especially his characterization of all mental illness—apart from specific brain diseases—as intranslatable into "problems of living", and his extreme Millian view about the need to tolerate the drug culture.

Nevertheless the qualifications and distinctions he proposes seem to me important. Secularity and demystification can only be achieved in this area when we recognize the vital difference between pharmacology and ceremonial chemistry. With characteristic logic Szasz claims that Baptism is to inaugurate a new social order in the sacrament of pharmacology. We should not confuse the sacrament of the sacrament with their social use and significance.

The distinction is perhaps too sharp, the line too precise, but the warning is necessary. And so long as we convert our problems of living into quasi-scientific technology, so long will the "doctors" of the mind succeed in preserving as the seches of the mud, so long as we fail to see ourselves and others as responsible we hand all of us over to "experts" manipulating us for our own and society's "good." So doing we make a mockery of the word "good."

The author is professor of sociology at the London School of Economics.

BOOKS



BOOKS

Propagation of waves

Ordinary Differential Equations—Theory and Practice
by John Hocking
Elek, £6.95 and £3.50
ISBN 0 236 17722 2 and 17723 0

Two often elementary textbooks on differential equations place undue emphasis on methods of obtaining explicit solutions of various simple types of equation. The danger is that the student may gain the initial impression that differential equations are always to be solved explicitly and that a general mathematical theory is not a matter of practical interest. Therefore it is good to see here an introduction to the theory of differential equations in which the various aspects of the theory are firmly related to practical situations. The book is described in its subtitle as an elementary, integral, applied treatment based on the wave equation, and it is worth emphasizing in view of the remarks just made that it is the treatment which is integrated rather than the differential equations themselves. On the cover the publishers claim that a good student-teacher could grasp much of the text between leaving school and entering a university.

This is extravagant for although the book is written well, it does require some maturity of thought on the part of the reader. The author writes not only for undergraduates but also for research students and professional mathematicians, scientists and engineers. At various points he takes the opportunity to correct errors which have crept into the literature.

The wave equation is in evidence throughout and the author describes many physical problems concerning the propagation of waves in diverse types of media. The mathematical theory is introduced in the context of the physical problems and the theory is, therefore, that of the

linear second-order equation. Topics which are introduced and applied include the variation of constants formulae, matching of solutions for discontinuous coefficients, equations with small parameters, asymptotic solutions with WKBJ, Wentzel, Kramers, Brillouin, Jeffreys theory and Stokes theory, eigenvalue problems, and some variational theory. Of these topics, those on asymptotic solutions and eigenvalue problems receive the most systematic treatment. The book is well written and makes up for the lack of a general theory of differential equations in the various aspects of the theory are firmly related to practical situations. The book is described in its subtitle as an elementary, integral, applied treatment based on the wave equation, and it is worth emphasizing in view of the remarks just made that it is the treatment which is integrated rather than the differential equations themselves. On the cover the publishers claim that a good student-teacher could grasp much of the text between leaving school and entering a university.

The book does not profess to deal with a wider range of ideas and techniques which mathematics undergraduates and lecturers may expect to see in an honours degree syllabus on the theory of differential equations. It will therefore find a use among such readers as a much richer source of applications of certain parts of the theory than is normally found in a single book. At the same time, scientists and engineers will read that certain apparently reasonable approximating procedures are not justified mathematically and, for these readers, the author points to the necessity of a proper mathematical basis for the subject.

The author's idea of relating theory and practice in a really positive way is a useful one and one which, within the limits he has set himself, he has realized. In view of the current interest in the non-linear differential equations of fluid mechanics and biology, it is an idea which could well be extended. A book on non-linear equations with the same aim as the present book, although it would inevitably be more advanced mathematically, would be valuable.

M. S. P. Eastham

Field equations

Introductory Electrodynamics
by Clive Crofton
Wiley, £6.95 and £3.95
ISBN 0 471 18929 4 and 18930 8

This textbook for the advanced undergraduate presents a field theory approach to problems in physics. It uses mathematics as a tool of physics and to some considerable degree bridges the conventional divisions between classical and quantum mechanics, between physical optics and electrodynamics, and between electrodynamics and quantum electrodynamics. This is all the more reason why the reader should not allow himself to be deterred by the slightly abrasive title.

Emphasis throughout is on the physical basis of the problems discussed, with the mathematical background relegated to an appendix. Where possible the underlying physics of differential equations is exploited and supplementary problems are given at the end of each chapter. The five chapters cover the field equations, their rectangular, cylindrical and spherical solutions, and finally approximate methods and applications.

The physics student will wish to read the book while the mathematician will probably wish merely to consult it. The latter will indeed find the physical applications of considerable value but will hardly be satisfied with the ad hoc approach to the standard differential equations and the special functions. In this connection classification of singular points and the hypergeometric functions would have given a much more

unifying feel of the mathematics, and would have avoided the rather unconvincing derivation of the eigenfunctions of the associated Legendre equation and the discussion of the Jeffreys, Wentzel, Kramers, Brillouin (WKBJ) approximation. There is somewhat bewildering for students. I feel it would be better to stop at quoting Jeffreys's connection formula, or alternatively, to derive it in an appendix using other of the two well-known methods.

A prerequisite for this book is a fairly stiff dose of vector algebra and analysis and the student would be advised to know well in advance the precise implication of the terms: potential, field, potential field and field potential.

The appendices cover Fourier and Laplace transforms, Bessel and Legendre functions, and the Legendre and Hermite polynomials. Approximate methods include the usual perturbation and variational methods. Applications include the hydrogen atom, elastic scattering, atomic lattice vibrations, Fraunhofer diffraction, rotating planets and gaseous stars, earth tremors and liquid metals.

Misprints inevitably occur in new books and this one is no exception. A non-trivial error occurs on page 166 where the expression for the probability of finding a particle in a volume V is incorrectly given as V instead of V/V_0 . A corrigendum would be extremely helpful for the student who would be a lot of correct answers to the problems for the lecturer. The bibliography is extensive but is weighted somewhat in the direction of the MSc student.

Derrick Crothers

Reviewers

Alan Angell is university lecturer in Latin American politics at Cambridge and has written "Politics and the Labour Movement in Chile"; R. D. Bedford lectures in English at the University of Exeter;

John English and American literature at University College, Dublin; Barbara Ingham lectures in economics at the University of Salford; she will shortly publish "Trade, Growth and Development: an exploratory study of three low-income countries";

Derek McNally is senior lecturer in the department of physics and astronomy at University College London; he is assistant director of the Univer-

Uniformity

Philosophy of Geology: 1785-1970 (Benchmark Papers in Geology, volume 13)
edited by Claude C. Albritton, Jr
Wiley, £13.00
ISBN 0 471 02052 4

The "Benchmark Papers in Geology" are a very mixed series, but this one is in a class of its own: an important group of philosophical papers in geology. Albritton provides a slim commentary by way of introduction, and it is a pity that he did not feel able to add to his own publications on the topic, none of which are included here. Nevertheless, contributions from Hutton, Playfair, Lyell, Chamberlin and Davis speak well for themselves.

The whole collection hangs together around the concept of uniformity. The first put forward in Hutton's "Theory of the Earth" (his abstract of 1785 is reproduced), the concept finds application in the complexities of historical geology, whether viewed from the point of view of erosional processes (Meckin), evolution (Simpsom) or time (Toulmin and Kline).

C. F. A. Pontin has called geology an unrestricted science, noting that in such cases the construction and testing of hypotheses is particularly difficult. Nevertheless, the subject remains strongly dependent on the method of multiple working hypotheses, and Chamberlin's classic article (reprinted from the 1955 republication) is supported by intriguing embellishments by G. K. Gilbert and W. M. Davis.

It is to be hoped that access to this book will encourage more historical geologists to think about the way their knowledge has been built up, that it will give them a deeper understanding of the subject than what often seems little more than a faith that, after all, it is a science and the conclusions reached by geologists are thus "scientific". Consideration of the way in which Lyell was led through his remarkable perception of the field evidence to appreciate the hitherto incoherent duration of geological time is a useful reminder of the nature and interpretation of geological evidence. Many geologists and physical geographers will have felt they could not afford previous volumes in this series: they will surely afford this one.

Keith Clayton

Problems

Stochastic Processes
by R. Coleman
Allen & Unwin, £4.50 and £1.95
ISBN 0 04 519016 X and 519017 8

Groups
by D. Wallace
Allen & Unwin, £3.75 and £1.50
ISBN 0 04 519012 7 and 519013 5

Fluid Mechanics
by J. Williams
Allen & Unwin, £3.75 and £1.50
ISBN 0 04 519014 3 and 519015 1

Problem solvers continue to demonstrate how many branches of university mathematics can be taught, at least up to a point, by a problem-based approach. Wallace breaks new ground for the series in applying the technique to pure mathematics. The subject matter is the frequently thin) discrete (and frequently finite) groups, with some geometrical applications and finishing with Sylow subgroups. To a certain extent his "later problems" are theorems, renamed. Williams leans heavily in the direction of two-dimensional groups of finite groups. Coleman is most interesting: he has an introductory chapter on the results needed from probability and goes on to problems of random walks, Markov chains and a few on renewal and queueing theory. All three are useful supplements to conventional textbooks.

Derek McNally is senior lecturer in the department of physics and astronomy at University College London; he is assistant director of the Univer-

sity of Exeter;

On time's arrow

An Inventive Universe
by K. G. Denbigh
Hutchinson, £3.75
ISBN 0 09 121100 X

If the earliest mythologies turn any basis for judgment, the question of time has engaged man's attention for millennia. But our modern concern for the nature of time must be related more directly to the development of scientific ideas from the seventeenth century onwards. The discussion in scientific terms gathered particular strength in the nineteenth century. One reason was the debate on space and time that led up to Einstein's concepts of relativity in the early years of the present century. (The first chapter of H. G. Wells's *The Time Machine* provides a fascinating illustration of this debate in progress.) A second reason stems from the growth of nineteenth-century physics. It became clear, on the one hand, that the main unifying principles of physics could be expressed in terms of the conservation of some quantity—most importantly, of energy. At about the same period, it also became apparent that thermodynamics was an exception: one of its basic laws could not be expressed via a conservation principle. This had an immediate relevance for the discussion of time. Where conservation laws apply, there is a certain symmetry with regard to time: a film of two billiard balls colliding can be run backwards without appearing ridiculous since momentum is conserved. But a film of an ice cube melting in a glass of water cannot be run backwards convincingly: we are within the realms of thermodynamics.

Professor Denbigh's book is concerned essentially with the question of whether time is a unidirectional process—the "now-ness" of the "now"—or whether, instead, it is a mental construct imposed by the human mind on a basically non-directional eternity. Most scientists who have been led to examine this question in recent years have been cosmologists, and so have had a special interest in the subject. Professor Denbigh is a thermodynamicist, and his approach to the implications of this topic for the discussion of time's arrow. He divides theories of time into two groups (following McTaggart)—the A-series and the B-series. The former can be described, very roughly,

as seeing the reality of time as a series of its progress, whereas the latter sees all events as equal reality. The B-series approach has often attracted proponents of relativity, but Professor Denbigh contends that no theory of time can readily be squared with the dynamic requirements. He argues that the reality of a unidirectional time's arrow.

This conclusion is reached by way through the book. The second half begins with a consideration of the problems presented by the processes, more especially by the increase in complexity of the creatures with time—something which has often been held to contradict the tenets of thermodynamics. The author proceeds to a consideration of determinism, which he relates to views of time such as are found in the theories of the B-series. The relation of these is therefore seen as allowing genuine innovations to occur in the universe, and this conclusion leads to a discussion of the inventive processes implied in the title of the book.

It would be impossible to examine here all the points raised by Professor Denbigh. Instead, I shall mention three minor criticisms (which, expressing my appreciation of the book as a whole). First, a number of peripheral points are omitted which might have been worth a passing comment. For example, to what extent would the occurrence of pre-cognition alter the judgment of the theories of time? Second, consider statements are made so dogmatically that they almost automatically invite opposition. Consider, for example, the assertion that "It is not conceivable that [meats] processed, could ever occur in the reverse temporal sequence". (Author's italics.) Yet at least one scientist (and not a supposition. Finally, I am not entirely convinced by all the distinctions drawn. Thus the difference introduced between "orderliness" and "organization" is a little precise.

Professor Denbigh tries to show, "the temporal processes as being a more active character than what we present". It is perhaps a treatment in the book to carry out a complete conviction at all points, the attempt is still commendable. The writing is fluent, and reveals a wide acquaintance with the subject; the notes to each chapter provide an excellent guide to the literature.

Jack Meadows

Relative movements

Positional Astronomy
by Derek McNally
Moller, £8.50 and £4.25
ISBN 0 584 10169 4 and 10168 6

Astronomy is an active branch of science concerned with the precise measurement and prediction of the changing positions of celestial objects in the sky. The subject extends from the practical requirements of the navigator and surveyor on the one hand to research into the theory of gravity on the other.

It might be thought that these various interests merge over a sufficiently wide area to warrant the existence of general textbooks on the subject, but in practice it is customary for students pursuing disciplines such as geodesy or astronomy in other books which cover the elements of positional astronomy. It is the student of astronomy, geodesy or astronomy seeking a deeper understanding of the forces which govern the observed relative movements of the earth, the planets, the stars and even the galaxies who is somewhat neglected, and Dr McNally's book presumably is aimed at them.

The fact that virtually no modern textbooks exist in this subject probably reflects the difficulty of the author's task, since astronomy has a reputation for dryness and dusty catalogues which have to be surmounted in this face of the apparent counter attractions of modern astrophysics

really deserved since the techniques of the subject move into a considerable oblique impact in many fields. The author points out in the preface that the book has grown out of a course of lectures and discusses the spoken word, which is a help way to avoiding dryness but which that the approach seems too heavily on that of Smart's *Text Book of Spherical Astronomy*, written in 1931. Since then, quite apart from the enormous advances in instrumental techniques, the more widespread use of matrix and vector algebra and particularly the arrival of computers have eliminated much of the purely algebraic and trigonometrical difficulties that arise in the use of spherical astronomy, and have left the investigator free to concentrate on the more interesting fundamental physical and statistical problems.

Dr McNally argues against taking advantage of these developments on the grounds that first-year undergraduate students may not be sufficiently advanced, but I would not always agree with him. I would seriously question whether these constraints are so strong now as they were in the 1930s, and justify the continued presence of this subject in historical catalogues.

However, while the professional astronomer (if that is the word) seems reluctant to fill a complex gap in the astronomical literature, it seems unfair to first-year students at Dr McNally's modestly written, thoughtful and well-planned textbook which should undoubtedly be an aid to the otherwise deprived student.

Classified Advertisements

Index to Appointments Vacant, Wanted and other classifications

Appointments vacant

Universities
Fellowships & Studentships
Polytechnics
Technical Colleges
Colleges and Institutes of Technology
Colleges of Education
Colleges of Further Education

Universities

UNIVERSITY OF WESTERN AUSTRALIA
PERTH
UNIVERSITY RESEARCH
FELLOWSHIPS
(POST-DOCTORAL)

Six Research Fellowships will be offered, to be taken up in the near future. Appointment will be for one year in the first instance with the possibility of renewal for a second year. Fellowships could possibly be renewed also for a third year, but in competition with any new applications. The Fellowships will be tenable in at least four of the following academic Departments to work in the broad areas stated below:

Mathematics—Functional Analysis or Probability and Statistics.
Microbiology—Immunovirology of Tumours or Epidemiology of Viruses.
Music—Composition.
Physical & Inorganic Chemistry—I.R. Spectroscopy, Thermodynamic Properties of Gases, Corrosion or Metal-Organic Chemistry, Inorganic Kinetics, or Physical, Structural or Preparative Inorganic Chemistry.
Physics—Statistical Physics.
Physiology—Plasma Protein Synthesis.
Psychology—Vision.
Soil Science & Plant Nutrition—Morphological and Physiological Study of Infection of Plant Roots by Vascular Bacterial Endophytes.
Surgery—Bile Salt Metabolism in the Aetiology of Carcinoma of the Colon.

The Fellowships are intended primarily for Ph.D. graduates (normally from other universities), or those with equivalent qualifications, who possess a high level of research ability and demonstrated significant research capability. Salary will be within the range \$A10,100-\$A11,655 per annum, and appointees may in certain circumstances be considered for admission to a superannuation scheme. Fellows may be given the opportunity to participate in teaching. Applications in duplicate (including full personal particulars, qualifications and experience, and a description of the details of the research interest should reach the Staffing Officer, the University of Western Australia, Nedlands, W.A. 6009, Australia, by 15 September, 1975. Late applications may be considered. Candidates should request three referees to write immediately to the Staffing Officer.

AUSTRALIA
UNIVERSITY OF
WESTERN AUSTRALIA

COMMERCIAL
Applications are invited for a vacant position in the Commercial Department of the University of Western Australia.

MAINTENANCE
Applications are invited for a vacant position in the Maintenance Department of the University of Western Australia.

TECHNICAL
Applications are invited for a vacant position in the Technical Department of the University of Western Australia.

ADMINISTRATIVE
Applications are invited for a vacant position in the Administrative Department of the University of Western Australia.

RESEARCH
Applications are invited for a vacant position in the Research Department of the University of Western Australia.

TEACHING
Applications are invited for a vacant position in the Teaching Department of the University of Western Australia.

LIBRARY
Applications are invited for a vacant position in the Library Department of the University of Western Australia.

WELFARE
Applications are invited for a vacant position in the Welfare Department of the University of Western Australia.

SPORTS
Applications are invited for a vacant position in the Sports Department of the University of Western Australia.

OTHER
Applications are invited for a vacant position in the Other Department of the University of Western Australia.

UNIVERSITY OF WESTERN AUSTRALIA

PERTH

UNIVERSITY RESEARCH FELLOWSHIPS (POST-DOCTORAL)

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Mathematics—Functional Analysis or Probability and Statistics.

Microbiology—Immunovirology of Tumours or Epidemiology of Viruses.

Music—Composition.

Physical & Inorganic Chemistry—I.R. Spectroscopy, Thermodynamic Properties of Gases, Corrosion or Metal-Organic Chemistry, Inorganic Kinetics, or Physical, Structural or Preparative Inorganic Chemistry.

Physics—Statistical Physics.

Physiology—Plasma Protein Synthesis.

Psychology—Vision.

Soil Science & Plant Nutrition—Morphological and Physiological Study of Infection of Plant Roots by Vascular Bacterial Endophytes.

Surgery—Bile Salt Metabolism in the Aetiology of Carcinoma of the Colon.

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Polytechnics continued

KINGSTON POLYTECHNIC
School of Economics and PoliticsLecturer II/Senior Lecturer
in International Economics

Applicants should have a higher degree and preferably teaching experience. The successful applicant will be expected to teach International Economics as an option on two degrees offered in the School; also to teach macro-economics to first- and second-year students on a number of courses. Appointment to start as soon as convenient.

Salary: Senior Lecturer, £4,761-£5,910
Lecturer II, £3,168-£4,974
(inclusive of threshold and London allowance).

Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, Kingston Polytechnic, Penrhyn Road, Kingston upon Thames, KT1 2EE. 01-549 1366.

BRISTOL

THE POLYTECHNIC
DEPARTMENT OF COMPUTER
STUDIES AND MATHEMATICS
LECTURER

This is a 1 year appointment, full-time, commencing in 1976.

Applicants should be able to teach in one of the following areas: (1) Computer studies, (2) Mathematics, (3) Statistics, (4) Data processing, (5) The teaching of these subjects to students of the Polytechnic and the successful candidate will be expected to teach in one of these areas. The successful candidate will be expected to teach in one of these areas. The successful candidate will be expected to teach in one of these areas.

Salary Scale: £3,269 to £5,511 (under review).
Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, Bristol Polytechnic, Ashley Down, Bristol BS34 4YH.

SHEFFIELD
POLYTECHNIC UNION OF
STUDENTS

ADMINISTRATOR

£3,123 to £4,439
(One-year post with Local Government Superannuation)

The Executive Committee of the above-mentioned Union of Students is seeking applications for the post of Administrator, which is a full-time post, commencing in 1976.

Applicants should have a degree or equivalent qualification in a relevant subject, and should have experience in administrative work.

Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, Sheffield Polytechnic, Sheffield S1 1WB.

LANCASTER
THE UNIVERSITYPROFESSORIAL FELLOWSHIP
IN STATISTICS

APPLIED TO THE SOCIAL SCIENCES

Applications are invited from professional statisticians and applied statisticians for a Professorial Fellowship in Statistics Applied to the Social Sciences.

The post (which will not involve routine teaching) will be held for two years in the first instance, but the successful candidate will be eligible for a further two years.

Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, Lancaster University, Lancaster LA1 4YW.

COLLEGES AND INSTITUTES OF TECHNOLOGY

BOLTON INSTITUTE OF TECHNOLOGY

Applications are invited for the post of

Principal Lecturer in Physics

Applicants must be well qualified and have extensive teaching and administrative experience. The successful candidate will be expected to teach in the Department of Physics and to be directly responsible to the Head of Department for the efficient day-to-day running of the Physics Section.

Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, Bolton Institute of Technology, Bolton BL3 7EQ.

Overseas

The British Council

Invites applications for the following posts:

English Textbook Project (Algeria)

Two posts—Consultant to the project and Textbook Writer.

Graduates with TEFL qualification and relevant textbook writing and syllabus development experience.

Salary: Consultant—£4,334-£5,594 pa.
Textbook Writer—£3,385-£4,264 pa.

Benefits: overseas allowances; free accommodation. One-year contracts.

English Language Teaching Institute (Sudan)

Academic Director, Khartoum

Degree, qualification in applied linguistics or similar relevant field; at least 3 years' experience.

Salary: £2,464-£5,524 pa.
Benefits: overseas allowances. Two-year contract, renewable.

Director of English Studies (Thailand)

DYEC Language Institute, Bangkok

Graduates with TEFL qualification and considerable experience. UK citizen.

Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, The British Council, 65 Davies Street, London W1V 2AA.

Lecturer in English (Saudi Arabia)

Medical Faculty, Riyadh University

Responsibility for ELT programme for pre-medical students. Candidates, men only, must have TEFL qualification and experience.

Salary: £4,704-£5,047 pa, tax free.

Benefits: housing and furniture allowance. One-year contract, renewable.

Lecturers in English (Algeria)

Institut de Technologie de l'Education in Algiers and Constantine

Graduates with TEFL qualification and experience. Knowledge of French essential.

Salary: £2,746-£4,264 pa.

Benefits: overseas allowance. Two-year contract, renewable.

Further details and application forms (to be returned by Tuesday, 26th August, 1975) from Appointment Officer, The British Council, 65 Davies Street, London W1V 2AA.

Overseas continued

ENGLISH LANGUAGE
TEACHERS

The Petroleum Institute of Tripoli requires

English Language Teachers

with B.A. qualification in English and teaching experience.

Please send applications to:

General Director,
Libyan Petroleum Institute,
P.O. Box 6184, Tripoli, Libya

Administration

COUNCIL FOR
NATIONAL ACADEMIC AWARDSAdministrative
Assistants

Applications are invited for two new posts of Administrative Assistant. It is intended that the Administrative Assistant will primarily be concerned with maintaining links between the "academic" units of the Council's organization, headed by the Senior Assistant Registrars, and the central administrative services, in particular the Council's Information and Statistics Unit. Their duties will involve them in the preparation of data about courses which have been or are about to be validated by the Council, assisting in the compilation of statistics on courses and students and possibly some committee work. Applicants should preferably be either graduates following a career in Educational Administration, or persons who have already obtained relevant experience in an academic institution.

Salary on appointment will be within the scale of £3,251 to £4,787 (currently under review), including threshold and London allowance payments.

Further particulars may be obtained from the Secretary, the Council for National Academic Awards, 344/354 Gray's Inn Road, London WC1. Closing date for applications 16th August, 1975.

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DEPUTY TO THE CHIEF EXECUTIVE OFFICER

Universities Superannuation Scheme Ltd is the Trustee Company which is responsible, at its office in Liverpool, for the operation of the new Superannuation Scheme for the academic staff of all UK Universities. The Scheme is compulsory for all new employees from April 1, 1975, and approximately 55,000 existing staff have an option to transfer to it over the five years up to 1980.

It is now proposed to appoint a senior person who will be involved in a variety of interesting aspects of pension administration, including the management of records, calculation and payment of benefits, dealing with up to 750,000 individual life insurance policies and accounting requirements, and who will deputise for the Chief Executive Officer.

Applicants should have a degree and a professional qualification and wide experience of pension fund administration in a responsible position. A knowledge of computer data processing, life assurance, accounting or university administration would be an advantage. A salary of £7,000 is proposed for this appointment. Applications should be sent to:

P. Birtwhistle M.A. FICA, Chief Executive Officer,
USS Ltd, 25th Floor, 25 Abchurch Lane,
London EC4N 3DF.

LEEDS

THE UNIVERSITY

SCHOOL OF MINING

LECTURER

IN MINING

Applications are invited from

qualified persons for the post of

Lecturer in Mining

in the School of Mining

Engineering, University of Leeds

The successful candidate will

be responsible for the teaching

of Mining Engineering to

students of the School of

Mining Engineering, and will

also be responsible for the

administration of the School

of Mining Engineering. The

successful candidate will be

expected to have a degree in

Mining Engineering, and will

also have experience in the

teaching of Mining Engineering

to students. The successful

candidate will be expected to

have a salary in the range

£3,251 to £4,787 (currently

under review), including

threshold and London

allowance payments. Further

particulars may be obtained

from the Secretary, the

Council for National

Academic Awards, 344/354

Gray's Inn Road, London

WC1. Closing date for

applications 16th August,

1975.

Applications should be sent

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Secretary, the Council for

National Academic Awards,

344/354 Gray's Inn Road,

London WC1. Closing

date for applications 16th

August, 1975.

General Vacancies

HM Inspectors
of Schools
Higher and Further Education

Applications are invited from men and women, preferably aged between 35 and 45, for appointment as HM Inspectors to work mainly in the field of Higher and Further Education, excluding the universities. All HMIs undertake general duties as well as specialist work. Candidates should therefore have an interest in Higher and Further Education generally and not only in the specialised areas listed below.

Youth and Community Work. In addition to appropriate qualifications in youth, community or social work, applicants should preferably have teaching or other relevant experience in schools. Further Education (vocational or non-vocational), or the field of community studies.

Social Sciences. Applicants should have a good honours degree in sociology or the social sciences and have appropriate teaching experience in Further or Higher Education. Qualifications and/or experience in social, community or youth work would be an advantage.

Health and Home Economics. Applicants should have academic qualifications and experience in one of the following areas: nursing, home economics, preparatory courses in the field of health and welfare, in addition they should have teaching experience in Further or Higher Education and be prepared to take a general interest in the educational opportunities available to women and girls.

General Education. Applicants should have academic qualifications in the humanities, the social or physical sciences or in technology. They should have good and varied teaching experience in Further or Higher Education. Experience of teaching general studies and of curriculum development would be an advantage.

Construction. The work will involve all aspects of construction education at craft, technician and professional level. Applicants should have a degree and/or an equivalent professional qualification in one or more of the following disciplines: architecture, building, civil engineering, building services engineering, estate management, quantity surveying, town planning. Appropriate teaching and professional/industrial experience is essential.

Business Studies. Applicants should have good academic and/or professional qualifications in business studies and experience of teaching advanced work in Further or Higher Education. A specialism in Law is essential for one of the 2 posts available. Relevant non-teaching experience would be an advantage for both posts.

Starting salary within the range £6,825-£9,415 (higher in London). Higher posts are normally filled by promotion.

Application forms (to be returned by 22nd August) may be obtained by writing to Miss B. C. Taylor, Department of Education and Science, Elizabeth House, 39 York Road, London SE1 7PH, or by telephoning London 01-828 8222 ext. 2237 or 2613. Please quote reference 5/75E.

NATIONAL YOUTH BUREAU

CONSULTATIVE GROUP ON YOUTH AND COMMUNITY WORK TRAINING

invites applications for

PROFESSIONAL
ADVISER

for the

CO-ORDINATION AND VALIDATION OF IN-SERVICE TRAINING FOR YOUTH AND COMMUNITY SERVICE PERSONNEL

A Panel, representative of all interests concerned, is being established to carry out this task on behalf of the Consultative Group on the Training of Youth and Community Workers. The Panel will be responsible for the education and training of youth and community and allied workers and be able to make a professional judgement on the whole range of courses within the Panel's concern.

Salary within first four points of new H/F.E. Principal Lecturers scale (£5,940-£6,642).

Further details and application forms (to be returned by 19th August, 1975) from: Director, National Youth Bureau, 17-23 Abchurch Lane, London EC4N 3DF.

STATISTICS:

Lecturer required for week 18th-22nd August, to give day-time tuition to small group of professional students working to about A Level standard, possibility further part-time employment.

CHART TUTORS

MODERN COURT, FARRINGTON ST, E.C.4.

Tel: 01-238 3741.

Who cares
what
teachers
think
anyway.

Their political attitudes could only change the future.

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